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Task 2
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Analysis of Cabin Lease Rates

Montana Outfitter Survey: Land Use Fees and Trip Characteristics

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FINAL REPORT

Economic Analysis
# of the Values of Surface Uses
# of State Lands

Task 2

ANALYSIS OF CABIN LEASE RATES

John Duffield

Report for Montana Department of State Lands
January 1993

Bioeconomics, Inc.
250 Station Drive
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EXECUTIVE SUMMARY

This report provides an analysis of fair market lease rates for cabin sites on Montana school trust lands. The objective of this report is to 1) identify fair market value and 2) provide suggestions on how the state can best realize these values on the school trust lands.

Montana DSL administers 618 cabin site leases on state lands in western Montana. Rentals on these leases are based on 3.5% of appraised values. Leases are for 15 years and fully assignable. There is no competitive bidding if the tenant wants to renew. Revenues in 1992 were $259,846 and average rental was $420. Sites are reappraised every five years. Because of this the appraised values used to compute rents lag well behind current market appraisals. For example, in 1992 the state received only 57% of the rent that would have resulted from up to date appraisals.

The approach to setting cabin site leases in Montana is generally sound. For this kind of site specific resource, it makes sense to base market values on appraisal. The key issue with regard to cabin leases is setting the rental rate - currently at 3.5% of appraised value. From the standpoint of the school trust, the rental rate should be at a fair market level. The focus of this report is on identifying a fair market rental rate for recreational homesite leases in Western Montana.

There are several general approaches that can be taken to identify a fair market rental rate for recreational properties. One approach is to undertake an appraisal that identifies both fee simple market value and market rents. Another approach is to examine the relationship between sales prices in the transfer (or assignment) of leases and appraised values of the lease. Each of these methods is described in turn.

The most direct way to identify a fair market rental rate is to collect information on both market rents and property values and simply compute the ratio. These kinds of studies have been undertaken by Thomas Stevens, a Missoula-based appraiser. Mr. Stevens has done appraisals of recreational properties for public agencies both in Idaho and Montana. His findings are that market rental rates are from 8% to 12% of the current market value with most rates in the 10% to 12% range. The conclusion of his appraisals has been that 10% is an equitable value.

Another approach to estimating market rental rates is to use sales prices in the assignment (or transfer) of state leases from one party to another. The basic idea is that a "leasehold value" is created when the contract rent on a given lease is below the market value. For example, suppose a given site can be leased for $200 per year when the real market value is $400. This difference creates a value (the "leasehold value") associated with holding the lease (an amount of $400 less $200 every year over the probable term of the lease). In such a situation, an individual may be willing to pay some amount, perhaps several thousand dollars, to the existing leaseholder for the right to take over a lease with a below-market rental rate.

Substantial leasehold values occur with cabin leases on state lands in Montana. For example, in a lease transfer on May 29, 1992 for a state cabin lease on Seeley Lake, the party receiving the lease assignment paid $41,500 for the right to take over the lease. The improvements on the lease were valued for 1992 (by the Department of Revenue) at $23,119, the difference of these two values ($18,381) is a leasehold value. Similarly, on April 4, 1992, control of a state lease on McGregor Lake changed hands for a sales price of $20,000. There were no improvements in this case so the full $20,000 is a leasehold value. Leaseholder values are also apparently created on Idaho cabin sites. The lease for a lot on Payette Lake transferred in August 1992 for a sale price of $145,220. The appraised improvements were worth only $20,866, indicating a gain to the former leaseholder in the amount of $124,354 for giving up the lease.

A way to use this data to estimate market rental rates is to assume the following equality: leasehold value plus the present value of the future annual contract (state) rent equals the fee simple market value of the property. The idea here is that if contract rents are held below the market, leaseholders can charge an amount (the leasehold value or interest) up to the amount that would make the purchaser ambivalent between taking over a given state lease or paying market value for a comparable privately owned site. This is consistent with the idea that leasehold value is created when contract rents are below market. By present value we mean the sum of future rents discounted to the present. Given this relationship, it can be shown that:

$$i = Ro\,(1 + L/V)^{-1}$$

where:

L = leasehold value
Ro = contract rental rate (3.5% in Montana)
V = appraised value
i = capitalization rate and market rental rate

The assumptions of this particular formulation are that the appraised value is a good measure of the market value of the property and that the present value of present and future contract rent payments is for an infinite time horizon. More complex and realistic models are discussed in an appendix to the main report. It is shown that this simple model provides conservative estimates of the market rental rate. This model gives a way of estimating the market rental rate (i) given an estimate of L/V (the ratio of leaseholder value to appraised value for the site). Ro, the contract rental rate, is a given that is known in any application (for example, Ro is .035 for state cabin leases in Montana).

This model is applied to three data sets: 1) assignment sales data for a set of five 1992 leasehold assignment sales prices (Table S-1) and two 1990 sales prices for seven Montana DSL cabin sites at McGregor, Seeley, Echo, Rogers and Elbow Lakes; 2) a set of seven 1987 to 1991 assignments derived from an appraisal done at McGregor Lake; and 3) a set of 13 assignment sales in 1992 for Payette and Priest Lake in Idaho.

In order to apply the model, average L/V is computed for each data set as: .467 (Table S-1), Table S-1. Leasehold Values for Montana State Cabin Lease Sites, Sample of Assignments in 1990 and 1992.

Date/ location	Sale price	Improv.	Leasehold value (L)	Assessed value (V)	L/V
4/24/92 McGregor	20,000	0	20,000	34,965	.572
3/18/90 Seeley	25,000	12,590	12,410	29,750	.417
9/17/90 Seeley	23,900	10,072	13,828	29,750	.465
5/29/92 Seeley	41,500	23,119	18,381	29,750	.618
6/25/92 Echo	37,500	9,206	28,294	42,399	.667
5/7/92 Rogers	4,000	0	4,000	43,230	.093
7/92 Elbow	19,000	10,987	8,013	18,200	.440
Sample average					.467

Notes: Data compiled by Jeanne Fairbanks, Montana Department of State Lands. Sale price for assignment of lease from one party to another obtained from purchaser. Assessed value of improvements and of property from Montana Department of Revenue, 1991 assessment for 1992. Leasehold value derived as sale price minus improvement assessed value. L/V is ratio of leasehold value to assessed value.

.428 and .489 respectively. The Montana data suggests that lease assignment sales in recent years for Montana cabin leases have captured about 45% of the market value for the leaseholder. Using the average estimates of .428 to .467 for L/V implies that the market rental rate on these sites is .061 to .066. In other words, contract rental rates could be increased by about 80% from 3.5% to around 6.5% to allow the state to capture full market value (rather than sharing a substantial share - about 45% - with the leaseholder).

The basic finding is that the evidence of substantial leasehold values indicates that contract rents on Montana DSL cabin sites are below the market. This means that the sites are more affordable for current leaseholders. However, substantial sales prices for lease tranfers mean that the policy of below market contract rentals does not make the leases more affordable for individuals who do not happen to hold a state cabin site lease and would like to. These individuals are being charged a premium (the leasehold value) to obtain these leases. In other words, new leaseholders end up paying market value to hold state leases - but a good share of the total payment over time goes to the current leaseholder (in the form of the lease assignment sales price) rather than to the state. Similar results hold for the Idaho data.

Further insight into the market for Montana state cabin lease sites is provided by examining competitive bids for state leases that come available either through default or new leases. A data set of 14 competitively bid leases is discussed in the main report. High bids received are compared to minimum bids set by DSL. The high bids range from being just barely more than the minimum bid to being almost three times as high as the minimum bid. On average, the high bid is 41% higher than the minimum bid. Taken by itself, this data suggests that the contract lease rate should increase by 41% (to about 5.0% of appraised value) to equal a market rental rate. This is somewhat lower than the increase indicated by the lease assignment sales data.

The difference between these two estimates may be due to systematic differences between the sites in the respective samples. For example, competitive bids may occur when a party defaults on a payment. If the site was a high quality site, one might expect the party to sell the lease rather than default. It may also reflect differences in the way the transactions are advertised. Competitive bidding for cabin sites is advertised by two weeks consecutive classified add notices in an area newspaper. However, lease assignment opportunites are sometimes listed with realtors. Both assignment sales prices and competitive bids are likely a function of advertising. Parties wanting to sell a lease may do the better job of marketing.

The conclusion of this report is that there is evidence that contract rental rates for Montana cabin lease sites are below the market rental rate. Current contract rental rates are 3.5% of appraised value. When state cabin leases are transfered, the selling party on average for our sample of recent Montana lease assignments receives about 45% of the market value of the unimproved property. Using generally conservative assumptions, market rental rates derived from leasehold assignment sales prices are on the order of 6.0% to 6.5%. Market rental rates based on competitive bids are on the order of 5.0%. By comparison, market rental rates based on appraisal of market rentals are on the order of 8.0% to 12.0%.

A limitation of this analysis is that the lease assignment sales price data is not based on a random sample of all lease assignments. Despite the limitations of the analysis, all of the available information points in the same direction and indicates significantly below market value lease rates are being charged.

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5.0 INTERPRETATION

1.0 INTRODUCTION

1.1 Introduction

This report provides an analysis of fair market lease rates for cabin sites on Montana school trust lands. This report is part of a larger project that provides an economic analysis of the surface uses of Montana state lands, including grazing, agriculture, and recreation. The objective for all of these uses is to 1) identify the fair market value, 2) provide suggestions on how the state can best realize these values on the school trust lands.

The following section provides some background on current policy in Montana and nearby states. Remaining sections describe methods, data, results and interpretation.

1.2 Background and Current Policy

The Montana Department of State Lands (DSL) administers 618 cabin site leases on state lands (Table 1). Most of these leases are located in forested or lakeside areas of western Montana with some concentrations on Flathead, Echo, Placid, Elbow and Seeley Lake. DSL also administers a smaller number of homesite leases (155) located primarily in eastern Montana.

Prior to 1988, the Montana's cabin site lease fees were typically token payments of $25 to $50 a year. In 1988, cabin leases were appraised and lessees were to pay rates equal to 5% of appraised values. This policy was very unpopular with leaseholders. The legislature revised the fee to 3.5% of appraised values, where it currently stands. Sites are reappraised every five years. This is a fairly lengthy period between appraisals given that recreational property values have been increasing quite rapidly in Western Montana in recent years. Based on appraisals in 1982 and 1991, recreational property has increased at 8.06% annually in Missoula County in the last nine years. Leases are for 15 years and are fully assignable.

For 1992, revenues from cabin leases were $259,846 (estimated by Jeanne Fairbanks). This is an average rental of $420 and implies an average appraised value of $12,000.

Because of the appraisal process used by DSL, the appraised values used for computing contract rents always lags behind current market values in a period when prices are increasing. The extent of this lag can be computed for the current round of appraisals. In 1993 revenues will rise to $285,573 or an average rental of $462 as about one-fifth of leaseholders (who have leases up for five year renewal) have rents increased based on 1992 appraisals. By 1997 all leaseholder rents will be based on 1992 appraisals. When all leases are updated to 1992 appraisals, the average rental will be $735 and the average appraised value will be $21,019. Accordingly the state in 1992 received only about 57% of the rent

Table 1. Range of Appraised Values and Derived Contract Rents for Montana State Lands Cabin and Homesite Leases if All Leases at 1992 Appraised Values.

CABINSITE/HOMESITE STATISTICS

1. Cabinsites (mostly west of the continental divide and recreational in nature).

   a. 618 cabinsite agreements

   b. Appraised values:

high	low	avg
$95,630	$800	$21,019

   c. Annual rentals:

high	low	avg
$3,347	$150*	$735

2. Homesites (mostly east of the continental divide and year round occupancy).

   a. 155 homesite agreements

   b. Appraised values:

high	low	avg
$20,100	$73	$3,604

   c. Annual rentals:

high	low	avg
$1,332	$150*	$206

* The statutory minimum for cabinsite/homesite annual rentals is $150 (77-1-208, MCA effective January 1, 1988). However, the effect of the law is being phased in and not all rentals have been adjusted up to the $150 minimum. By 1994 all rentals will be in accordance with the statutory minimum.

Source: Montana DSL.

that it would receive if rents were based on appraisals reflecting the current market.

By 1997 the state will be receiving average rental of $735, but by then the true appraisal value may have increased. For example, if the recent 8% price appreciation seen in Missoula County continues and applies to all cabin sites, the average appraised value in 1997 could be about $31,000 and support an average contract rental of $1,085.

Table 1 regarding rents and appraisal values for cabin and homesites was provided by DSL. It is included here to show the range in rents and appraisals. The appraised values in Table 1 are based on appraised values for 1992 developed by the Department of Revenue. If all lease appraisals were updated to these 1992 levels, then the annual rentals shown (e.g. $735 average for cabin rentals) would be received. As noted, new appraisals are used to compute contract rent only at five year renewal/review points. In 1993 about 140 of 618 leases (leases up for five year review in 1993) will have new contract rents based on the 1992 appraisals.

Similar to the discussion of cabin leases, the homesite leases in Table 1 show 1992 appraised values and hypothetical average rent levels if these appraisals were the basis of current contract rents. Total revenues from homesite leases for 1992 are not readily available.

1.3 Policy in Other Western States

Montana is one of only a few western states which administers a large number of cabin site leases. Alaska, with over 5,000 private cabin leases, has by far the most leases. Because most of Alaska's state land is not school trust land, it is not bound by the same revenue maximization mandates that govern the older states. Minnesota had about 2,000 cabin lease, but has recently sold over half of these leases. Idaho with about 600 leases is the other western state with significant numbers of cabin leases.

Some states view cabin leases as costing much more to administer than they generate in revenues for the school trust. Except in Alaska, most state cabin leases were awarded decades ago. Often states entered into long-term agreements for a fixed annual rent, for example $50 a year, which over time have evolved to being far under market value. In addition, in some states cabin leases are expensive to administer because of their scattered locations and the difficulties of working with numerous individual leaseholders. Based on our recent survey of state lands administrators, Minnesota, Oregon, and Washington feel they are losing money on their cabin sites.

States receive annual cash rent payments for their cabin site leases. Lease rates for state-owned cabin sites are generally determined through a graduated fee system or a percentage of the market value of the land. Where graduated fees are imposed, the fees assigned are based on staff judgements which differentiate between higher value and lower value leases. Utah charges $800 for its high value cabin sites and $400 for its lowest value cabin sites. In Louisiana, the cabin site rents range from $100 to $300.

Where lease fees are based on a percent of the cabin site's appraised value, states are required to conduct periodic appraisal of the land's value. An important consideration in the appraisal is whether the cabin site is treated as recreational home property or as raw land. In Wyoming, cabin sites are treated as raw land, which results in very low appraised values. Wyoming acknowledges that this system greatly undervalues its cabin site properties. Average cash rents for Wyoming leases are only about $50 a year (Jamie Van Hatten, 1992). As in Montana, state cabin leases are treated as recreational homesites in Idaho and Minnesota. Lease rental rates are 2.5 percent of appraised value in Idaho and 5 percent in Minnesota (and, as noted, 3.5% in Montana).

Many of Idaho's cabin sites are located at Priest and Payette lakes. The value of real estate surrounding theses lakes has increased dramatically, and this is reflected in high appraised values for the state's cabin sites. Idaho receives a minimum of $750 a year for its second tier leases (located off the lakes) and $2,800 to $3,000 for its lakeside properties. Idaho also has a major corporate leaseholder who pays $450,000 a year for a lakeside site for a corporate lodge. Idaho cabin leases have a cap on how much leases are allowed to increase each year as they move toward 2.5% of newly appraised values. This cap is no more than a 5.3 percent annual increase (Don Hobbs, Idaho, 1992). Idaho's revenues from cabin leases are approximately a million dollars a year.

For many states, for example Wisconsin, the solution to unprofitable cabin leases was to sell off the leases. Washington is in the process of selling off its few remaining cabin sites. Minnesota has also recently sold many of its cabin sites. Where cabin sites are sold, states are required to receive at least full market value for the property. The cabin site must be appraised prior to the sale. In most states, the sale of state cabin site must be transacted through a bidding process, usually a public auction.

The auctioning of state cabin leases has created an interesting dilemma for leaseholders in Minnesota. Minnesota's cabin site lessees successfully lobbied the state legislature to order the sale of the state's 2,000 cabin sites. When sites were auctioned, vigorous competition moved land sale prices much higher than appraised values. In some instances, leaseholders were out bid for their cabin sites, which forced them into selling or removing their cabins and other on-site improvements. After observing the outcomes of initial cabin site auctions, many leaseholders chose to renew state leases instead of attempting to purchase their cabin sites from the state (Jim Lawler, Minnesota, 1992).

Lease terms for cabin leases range from 3 to 5 years in Louisiana to 50 years in Wyoming. Alaska and Idaho cabin leases are for 10 years and Minnesota's are 20 years. As noted, Montana cabin site leases are awarded for 15 years, after which the leaseholder has the right to renew the lease. There is no competitive bidding required in Montana when the cabin lease is renewed.

1.4 Issues

The approach to setting cabin site leases in Montana is generally sound. For this kind of site specific resource, it makes sense to base market values on appraisal. The key issue with regard to cabin leases is setting the rental rate - currently at 3.5% of appraised value. From the standpoint of the school trust, the rental rate should be at a fair market level. The focus of the remainder of this report is on identifying a fair market rental rate for recreational homesite leases in Western Montana.

2.0 METHODS

There are several general approaches that can be taken to identify a fair market rental rate for recreational properties. One approach is to undertake an appraisal that identifies both fee simple market value and market rents. Another approach is to examine the relationship between sales prices in the transfer (or assignment) of leases and appraised values of the lease. Each of these methods is described in turn.

2.1 Appraisal of Market Value and Rents

The most direct way to identify a fair market rental rate is to collect information on both market rents and property values and simply compute the ratio. These kinds of studies have been undertaken by Thomas Stevens, a Missoula-based appraiser. Mr. Stevens has done appraisals of recreational properties for public agencies both in Idaho and Montana. His findings are that market rental rates are from 8% to 12% of the current market value with most rates in the 10% to 12% range. The conclusion of his appraisals has been that 10% is an equitable value. A similar appraisal effort was commissioned by the State of Idaho in 1990. Appraisers initially reported a market rental rate appropriate for state cabin lease sites of 8%. After receiving additional information on similar sites in California, the market rate finding was lowered to between 4.5% and 5.5%. It is not clear that this was a neutral economic analysis.

The market rental rate is generally stated as a percentage of market value. If market value is approximated by appraised value, then the market rental rate provides a basis for a contract rental rate (such as in a contract to hold a state cabin lease) as a percent of appraised value.

2.2 Deriving Market Rental Rates from Lease Assignments

Another approach to estimating market rental rates is to use sales prices in the assignment (or transfer) of state leases from one party to another. The basic idea is that a "leasehold value" is created when the contract rent on a given lease is below the market value. For example, suppose a given site can be leased for $200 per year when the real market value is $400. This difference creates a value (the "leasehold value") associated with holding the lease (an amount of $400 less $200 every year over the probable term of the lease). In such a situation, an individual may be willing to pay some amount, perhaps several thousand dollars, to the existing leaseholder for the right to take over a lease with a below-market rental rate. (A more careful definition of these terms is provided in Appendix A, which was provided by Jeanne Fairbanks).

Large payment values are observed in the transfer of leases between parties in rent-control areas in major cites. In this case, rents are held below (often far below) market rent levels. This same phenomena seems to occur with cabin leases on state lands in Montana. For example, in a lease transfer on May 29, 1992 for a state cabin lease on Seeley Lake, the party receiving the lease assignment paid $41,500 for the right to take over the lease. The improvements on the lease were valued for 1992 (by the Department of Revenue) at $23,119, the difference of these two values ($18,381) is a leasehold value. Similarly, on April 4, 1992, control of a state lease on McGregor Lake changed hands for a sales price of $20,000. There were no improvements in this case so the full $20,000 is a leasehold value. These examples were provided by Jeanne Fairbanks and are examined further in Sections 3.0 and 4.0 below. Leaseholder values are also apparently created on Idaho cabin sites. The lease for a lot on Payette Lake transferred in August 1992 for a sale price of $145,220. The appraised improvements were worth only $20,866, indicating a gain to the former leaseholder in the amount of $124,354 for giving up the lease. This and other Idaho data is discussed below.

A way to use this data to estimate market rental rates is to assume the following equality: leasehold value plus the present value of the future annual contract (state) rent equals the fee simple market value of the property. The idea here is that if contract rents are held below the market, leaseholders can charge an amount (the leasehold value or interest) up to the amount that would make the purchaser ambivalent between taking over a given state lease or paying market value for a comparable privately owned site. This is consistent with the idea that leasehold value is created when contract rents are below market. By present value we mean the sum of future rents discounted to the present. This relationship can be stated mathematically as:

$$L + (Ro * V)/i = V \qquad (1)$$

where:
L = leasehold value
Ro = contract rental rate (3.5% in Montana)
V = appraised value
i = capitalization rate and market rental rate

The assumptions of this particular formulation are that the appraised value is a good measure of the market value of the property and that the present value of present and future contract rent payments is for an infinite time horizon. The model also assumes that the market rental rate is equal to the capitalization rate (alternative models are discussed in Appendix B).

Another way to look at this relationship is to multiply both sides of the equation by i to derive:

$$(i * L) + (Ro * V) = (i * V) \qquad (2)$$

In other words, the sum of the amortized leasehold interest payment plus the annual contract rental should equal the amortized market value of the property. Note that the capitalization rate is the factor that relates an annual income or rental from a property to the property's market value. Accordingly i * V also has the interpretation of being the market rental from the property and i has the interpretation of being the market rental rate.

Equation (1) can also be solved for i, the market rental rate, or:

$$i = Ro\,(1 + L/V)^{-1} \qquad (3)$$

This model therefore gives a way of estimating the market rental rate (i) given an estimate of L/V (the ratio of leaseholder value to appraised value for the site). Ro, the contract rental rate, is a given that is known in any application (for example, Ro is .035 for state cabin leases in Montana).

As a hypothetical example, suppose that L/V was equal to 0.5. This means that current leaseholders are able to capture 50% of the market value of the property in a leasehold value payment (L) when the lease is assigned. If the leaseholder captures 50% of the market value, this means that the contract rent is only capturing the remaining 50% of the market value for the property owner (such as the state in the case of a cabin lease). When the estimate of L/V at 0.5 is plugged into equation (3), the factor $(1 + L/V)^{-1}$ takes the value of 2.0. This means that the contract rental is only half as high as the market rental rate and would have to be doubled to equal the market rental rate. This result makes sense in that the current rental rate is apparently only capturing half the market value for the property owner.

An advantage of this method is that it can be used to derive a market rental rate for properties which are never or rarely up for sale - such as state cabin leases.

The following sections describe data on sales (or assignments) of cabin leases in Montana and Idaho and results from implementing the model given in equations (1) and (3).

Note that there are more complex models that can be formulated to explain the relationship of leasehold value, property value, contract rent and market rent. For example, one could examine models where the capitalization rate and the market rental rate are different from each other and one or the other is a known constant (for example, obtained from appraisal studies). These alternative models are discussed briefly in Appendix B. For the capitalization rates suggested by Steven Thomas, the resulting estimated market rental rates for the Appendix B models are higher than those estimated in the following sections. Accordingly, the model examined here (and given in equations (1) and (3)) leads to estimates of market rental rates that are conservative compared to other plausible models (Appendix B).

It should be noted that to the extent that the buyer in an assignment transaction recognizes that there is a risk that policies concerning contract rent can change. In that situation a risk factor would have entered into the price offered and the sum of the observed price and the present value of contract rents will not completely reflect the full market value of the site, fee simple. This has implications for the analysis in that it makes it even more conservative.

3.0 DATA COLLECTION

Data on sales prices related to lease assignments of cabin sites in Montana and Idaho were provided by Jeanne Fairbanks of Montana DSl and Bryce Taylor, who works for the State of Idaho. These individuals are not responsible for the interpretations made here. The data for Montana is summarized in Tables 2 and 3 and the data for Idaho in Table 4.

Table 2. Leasehold Values for Montana State Cabin Lease Sites, Sample of Assignments in 1990 and 1992.

Date/ location	Sale price	Improv.	Leasehold value (L)	Assessed value (V)	L/V
4/24/92 McGregor	20,000	0	20,000	34,965	.572
3/18/90 Seeley	25,000	12,590	12,410	29,750	.417
9/17/90 Seeley	23,900	10,072	13,828	29,750	.465
5/29/92 Seeley	41,500	23,119	18,381	29,750	.618
6/25/92 Echo	37,500	9,206	28,294	42,399	.667
5/7/92 Rogers	4,000	0	4,000	43,230	.093
7/92 Elbow	19,000	10,987	8,013	18,200	.440
Sample average					.467

Notes: Data compiled by Jeanne Fairbanks, Montana Department of State Lands. Sale price for assignment of lease from one party to another obtained from purchaser. Assessed value of improvements and of property from Montana Department of Revenue, 1991 assessment for 1992. Leasehold value derived as sale price minus improvement assessed value. L/V is ratio of leasehold value to assessed value.

Table 3. Leasehold Values for Montana State Cabin Lease Sites, Sample of Assignments in 1987 to 1991 on McGregor Lake.

Date/ location	Sale price	Improv.	Leasehold value (L)	Assessed value (V)	L/V
1987 lot 1	25,000	15,000	10,000	17,500 (1982)	.571
1987 lot 8	10,000	2,500	7,500	16,000 (1982)	.469
1991 lot 12	14,000	4,000	10,000	38,439 (1992)	.260
"recent" lot 15	25,000	15,000	10,000	29,106 (1992)	.344
1988 lot 16	12,000	2,000	10,000	16,000 (1982)	.625
1991 lot 17	15,000	3,000	12,000	30,282 (1992)	.396
1990 lot 27	10,000	0	10,000	29,938 (1992)	.334
Sample average					.428

Notes: Data derived from appraisal by Roger Jacobson. Sale price for assignment of lease and value of improvement reported in appraisal. Appraised values for property in 1982 and 1992 obtained from Jeanne Fairbanks. Leasehold value derived as sale price minus improvement assessed value. L/V is ratio of leasehold value to assessed value.

Table 4. Idaho State Cabin Site Lease Assignment Sales in Fiscal Year 1993.

ASSIGNMENT OF COTTAGE SITE LEASES FY 93

Year	Month	Lease Number	CLASS	Lot Number	Assignor	Assignee	Estimated Lot Value	Full Sale Price	Improvement Value	Leasehold Value	Premium Rent	Annual Rent	Area
1992	Jul	1 R-5307	II	Lot 20	Clarke, James B.	Fredric & Deborah Shoemaker	13,440	88,000.00	35,239.00	31,283.00	3,128.30	720.00	Payette Lake
		1 R-1012	I	Lot 272	Eacho, John K.	Charles & Kathryn George	80,040	110,000.00	86,961.00	18,619.00	1,861.90	2,001.00	Priest Lake
		1 R-1111	I	Lot 202	Johnson, Loris O.	Dexter & Nanci Brown	90,480	180,000.00	130,503.00	24,752.00	2,475.20	2,262.00	Priest Lake
		6 R-1354	I	Lot 220-U	West, Jack E.	William & Deborah Poppy	96,280	110,000.00	82,561.00	17,373.00	1,737.30	2,407.00	Priest Lake
		8 R-1023	I	Lot K	Johnson, Norman K.	John & Kathy Simmons	67,280	49,000.00	30,878.00	15,222.75	1,522.28	1,682.00	Priest Lake
		8 R-1289	I	Lot 237	Burgeson, Byron J.	Taffy Courteau	87,000	57,000.00	31,185.00	24,443.40	2,444.34	2,175.00	Priest Lake
		20 R-5230	II	Lot 5	Hicks, George C.	E. Jane Nelson	16,520	39,900.00	25,805.00	12,439.00	1,243.90	720.00	Payette Lake
		22 R-1320	I	Lot 238	Johnson, Roy W.	Richard & Kathleen Schultheis	68,440	155,000.00	109,209.00	39,668.00	3,966.80	1,711.00	Priest Lake
		23 R-1220	I	Lot 205	Vinther, Newton H.	Vinther Family Trust	84,680	N/A	Family transaction			2,117.00	Priest Lake
		29 R-1078	I	Lot B	Oien, Jerold E.	Roy & Evelyn Ginnold	64,960	N/A	Family transaction			1,624.00	Priest Lake
		29 R-1238	I	Lot 201	Hoffard, Jr., John A.	James & Jacqueline Welsh	93,960	85,000.00	53,863.00	16,974.00	1,697.40	2,349.00	Priest Lake
	Aug	5 R-1135	I	Lot 159	Abrams, Brian	Richard & Diane Weigand	87,000	72,000.00	39,458.00	23,241.00	2,324.10	2,175.00	Priest Lake
		10 R-5226	II	Lot 6	Palmer, Vera E.	Michael & Marla Miller	16,520	29,298.35	16,520.00	12,483.35	1,243.34	720.00	Payette Lake
		10 R-5903	I	Lot 6	Spillman, Lynn	Glenn & Sandra Bromagen	103,959	145,220.00	20,866.00	120,574.00	12,057.40	747.63	Payette Lake
		19 R-1296	I	Lot 252	Hubbard, Wallis D.	Jeffery & Susan Owens	48,720	65,000.00	9,100.00	47,540.00	4,754.10	1,218.00	Priest Lake
	Sep	2 R-1161	I	Lot 48	Heglar, Robert P.	Nancy Henry & Margaret Hanson	96,280	N/A	Family transaction			2,407.00	Priest Lake

Table 2 is a set of five 1992 leasehold assignment sales prices and two 1990 sales prices for seven Montana DSL cabin sites at McGregor, Seeley, Echo, Rogers and Elbow Lakes. This data set was collected by Jeanne Fairbanks. Appraisal values for the property and improvements are from DOR for 1992. These are the appropriate values to use in deriving leasehold value for a 1992 sales price but lead to conservative estimates of leasehold value for the 1990 sales data.

Another data set is provided in Table 3. This set of seven 1987 to 1991 assignments was derived from an appraisal done at McGregor Lake by Roger Jacobson, a Kalispell appraiser. Mr. Jacobson kindly supplemented the information reported in his appraisal with the sales dates, as available. The appraised values at all sites were obtained from Jeanne Fairbanks. For the 1991 sales prices, leasehold values are derived with 1992 appraisal values (making the estimates somewhat conservative). For the 1987 and 1988 sales, Mr. Jacobson suggested using the 1982 appraisals (rather than interpolating between 1982 and 1992 appraisals). Mr. Jacobson said that prices actually dropped in 1983 and 1984 and had risen to 1982 levels only by 1987-1989. This interpretation was also supported by Jeanne Fairbanks.

The assignment sales reported in Tables 2 and 3 are not based on a random sample of lease assignments for Montana DSL cabin sites, but rather represent the most readily available data. Jeanne Fairbanks estimates that in a given year there may be as many as 30 lease assignments for state cabin leases with perhaps 20 of these being market transactions and the remaining third intra-family transfers. Accordingly, the data on 1992 sales in Table 2 represents perhaps one-fourth of the market transaction lease assignments for DSL cabin sites in 1992.

The data for 16 lease assignments for Idaho state-owned cabin sites in 1992 is provided in Table 4. Three of these transactions are intra-family. Table 4 provides leasehold values derived by the state of Idaho. These leasehold values are somewhat smaller than the simple difference of full sale price and improvement value. According to Bryce Taylor, this is because Idaho also allows the subtraction of the value of personal property (bedding, utensils, furniture) that may be transfered with a lease. Mr. Taylor implied that the personal property values allowed may be somewhat generous. Accordingly, in the results below, we report L/V for both the Idaho-computed leasehold value (sales price minus improvement value minus personal property) as well as the more conventionally computed leasehold value (sales price lesss improvement value).

The previously referenced examples of leasehold value are drawn from these tables.

Table 5 provides another type of data: competitive bids on 14 Montana state cabin lease sites in 1992. This data was provided by Jeanne Fairbanks. There are competitive bids for cabin lease sites if it is a new lease or a lease that has been abandoned.

Table 5. 1992 State Cabin Lease Competitive Bids.

LOT	LAKE/VIEW	MARKET VALUE/MIN BID	MARKET VALUE/HIGH BID	COUNTY
Mudd Creek Lot 14	Creek Frontage	$2,700 - 150.00	$11,428 - 400.00	Sanders
Grant Cr. Lot 2	View Mountains	$23,000 - 805.00	$26,742 - 936.00	Missoula
Grant Cr. Lot 1	View Mountains	$23,000 - 805.00	$28,571 - 1,000.00	Missoula
cGregor Lk. Lot 5	Lake	$20,000 - 700.00	$43,657 - 1,528.00	Flathead
Rogers Lk. Lot 14	Lake	$20,370 - 712.95	$22,857 - 800.00	Flathead
Rogers Lk. Lot 24	Lake	$15,330 - 536.55	$20,228 - 701.00	Flathead
Rogers Lk. Lot 30	Lake	$16,095 - 563.32	$20,000 - 700.00	Flathead
Rogers Lk. Lot 19	Lake	$24,750 - 866.25	$44,357 - 1,552.50	Flathead
Rogers Lk. Lot 27	Lake	$18,260 - 639.10	$18,285 - 640.00	Flathead
Rogers Lk. Lot 15	Lake	$19,238 - 673.33	$22,857 - 800.00	Flathead
Shore Flathead Lk. Summer Home Lot 15	Needed Road Development View of Lake	$16,400 - 574.00	$18,771 - 657.00	Lake
. Shore Flathead Lk. Summer Home Lot 14	Needed Road Development View of Lake	$17,100 - 598.00	$20,000 - 700.00	Lake
. Shore Flathead Lk. Summer Home Lot 16	Needed Road Development View of Lake	$16,000 - 595.00	$20,165 - 705.80	Lake
. Shore Flathead Lk. Summer Home Lot 13	Needed Road Development View of Lake	$17,200 - 602.00	$22,857 - 800.00	Lake

4.0 RESULTS

4.1 Analysis of Market Lease Rate for Montana Sites

Based on the discussion in section 2.2, market rental rates for Montana state cabin lease rates can be derived using equation (3). What is needed is an estimate of the ratio of leasehold value to appraised value. This is provided for the two Montana samples of cabin lease assignments in Tables 2 and Table 3.

In Table 2, the leasehold to assessed value ratio (L/V) varies from .093 to .667 and averages .467. The range for L/V in Table 3 is .225 to .625 and averages .428. This data suggests that lease assignment sales in recent years for Montana cabin leases have captured about 45% of the market value for the leaseholder. Using the average estimates of .428 to .467 for L/V implies that the market rental rate on these sites is .061 to .066. In other words, contract rental rates could be increased by about 80% from 3.5% to around 6.5% to allow the state to capture full market value (rather than sharing a substantial share - about 45% - with the leaseholder).

The basic finding is that the evidence of substantial leasehold values indicates that contract rents on Montana DSL cabin sites are below the market. This means that the sites are more affordable for current leaseholders. However, substantial sales prices for lease tranfers mean that the policy of below market contract rentals does not make the leases more affordable for individuals who do not happen to hold a state cabin site lease and would like to. These individuals are being charged a premium (the leasehold value) to obtain these leases. Our assumption is that the sum of the leasehold value and the stream of contract rents is about equal to market value. In other words, new leaseholders end up paying market value to hold state leases - but a good share of the total payment over time goes to the current leaseholder (in the form of the lease assignment sales price) rather than to the state.

It may be noted that the appraisal process in Montana leads to an "effective" contract rental rate (as a ratio to current appraised value) that is below the contract 3.5%. As noted in section 1.1, this is because the appraisal basis for contract rents lags behind the market appraisal. This does not affect the conclusion that contract rental rates should be raised by about 80% to around 6.5%.

4.2 Market Lease Rate on Idaho Sites

It is interesting to note that the phenomena of substantial leasehold values also holds for cabin site lease transfers in the neighboring state of Idaho. Based on the Idaho-computed leasehold values reported in Table 4, the ratio of leasehold value to assessed value ranges from .180 to 2.33. Excluding the one observation at 2.33, the average is .489. This is similar to the average computed for the Montana sites. This is interesting given the much higher average value of the Idaho assignment sales prices (from $29,000 to $180,000). The Idaho values imply a market rental rate (given Idaho's contract rental rate of 2.5%) of about

4.9%. If the Idaho L/V is computed the same as Montana's (sales price less improvement value), the average L/V is .586. (Again excluding the highest individual L/V, which appears to be an outlier.) This ratio implies a market rental rate for Idaho of 6.0%, similar to the estimates for Montana.

4.3 Competitive Bids

Further insight into the market for Montana state cabin lease sites is provided by the set of competitive bids in Table 5. The table shows both the minimum bid based on the contract rental rate and applicable appraisal at time of bidding as well as the high bid received. The high bids range from being just barely more than the minimum bid to being almost three times as high as the minimum bid. On average, the high bid is 41% higher than the minimum bid. Taken by itself, this data suggests that the contract lease rate should increase by 41% (to about 5.0% of appraised value) to equal a market rental rate. This is somewhat lower than the increase indicated by the lease assignment sales data.

The difference between these two estimates may be due to systematic differences between the sites in the respective samples. For example, competitive bids may occur when a party defaults on a payment. If the site was a high quality site, one might expect the party to sell the lease rather than default. It may also reflect differences in the way the transactions are advertised. Competitive bidding for cabin sites is advertised by two weeks consecutive classified add notices in an area newspaper. However, lease assignment opportunites are sometimes listed with realtors. Both assignment sales prices and competitive bids are likely a function of advertising. Parties wanting to sell a lease may do the better job of marketing.

5.0 INTERPRETATION

There is some evidence that contract rental rates for Montana cabin lease sites are below the market rental rate. Current contract rental rates are 3.5% of appraised value. When state cabin leases are transfered, the selling party on average receives about 45% of the market value of the unimproved property. Using generally conservative assumptions, market rental rates derived from leasehold assignment sales prices are on the order of 6.0% to 6.5%. Market rental rates based on competitive bids are on the order of 5.0%. By comparison, market rental rates based on appraisal of market rentals are on the order of 8.0% to 12.0%.

A limitation of this analysis is that the lease assignment sales price data is not based on a random sample of all lease assignments.

Another problem leading lease rates to deviate from market values is the appraisal process. Without changing the contract rental rate, cabin rental revenues could be increased by basing rentals on current appraisals. This could be done by developing a continuous appraisal process rather than the current five year review process. One could also tie escalation rates to the previous five year period. Costs associated with such a process have not been examined.

LEASE AND LEASEHOLD INTEREST

DEFINITIONS

Lease: means a transfer of the right to possession and use of good for a term in return for consideration, but a sale, including a sale on approval or a sale or return, or retention or creation of a security interest is not a lease. Unless the context clearly indicates otherwise, term includes a sublease. MCA 30-2A-103 (j)

Lease Agreement: means the bargain, with respect to the lease, of the lessor and the lessee in fact as found in their language or by implication from other circumstances, including course of dealing or usage of trade or course of performance as provided in this chapter. Unless the context clearly indicates otherwise, the term includes a sublease agreement. MCA 30-2A-103 (k)

Leasehold Interest: means the interest of the lessor or the lessee under a lease contract. MCA 30-2A-103 (m)

Lease interests result when the bundle of rights is divided by a lease. The lessor and the lessee each obtain interest, which are stipulated in contract form and are subject to contract law. The divided interests resulting from a lease represent two distinct, but related, estates of property--the lease fee estate and the leasehold estate. These estates do not remain in perpetuity or exist for the life of the tenant; rather, they are personal property, and the tenant is given the right to use the real estate for specific purposes over a period of time.

The leased fee estate is the ownership interest held by the landlord with the right to lease to others. The leasehold estate is the right to use and occupy the real estate for a stated term and under certain conditions as conveyed by the lease.

Leasehold Position:
The most obligation associated with the rights to the use and occupancy of a leasehold interest is the payment of rent. **Contract rent** is the actual rental income specified in a lease. A leasehold interest usually has value when contract rent is less than market rent. **Market rent** is the rental income that a property would most probably command in the open market.

When market rent exceeds contract rent, the leasehold interest may have value, assuming that the lease term is long enough to be marketable and the lease allows for subletting or assignment. When contract rent exceeds market level, the leasehold may have a negative value.

Lease clauses can influence property value and leasehold interest. DSL's Special lease of State Lands agrees between the lessor and lessee that:

1. the term of the lease is 15 years and at the end of each 5 year period the rental shall be reviewed and adjusted.
2. The lessee has the option to make application to renew the lease at the time of expiration. The commissioner has the option to cancel the lease at that time.

2. The lessee has the option to make application to renew the lease at the time of expiration. The Commissioner has the option to cancel the lease at that time.

3. The lessee has the right to assign or sublease the property upon approval of the Department. If the lessee subleases state lands on terms less advantageous to the sublesee than the terms given by the state, the Department shall cancel the lease.

4. All or any portion of the land under lease may be withdrawn from this lease by the State upon reasonable notice, except through special agreement with the lessee. The leasee shall be entitled to reasonable compensation for any improvements thereon. The lands may be withdrawn to promote the duties and responsibilities of the Board of Land Commissioners.

If an assignment is made upon terms less advantageous to the assignee than terms being given by the state, the assigmnet shall not be approved. Assignments which result in a profit to the leasee/assignor over and above the value of the improvements my result in cancellation of the lease. Lessee/assignor's signature constitutes proof that the lessee has been fully compensated for all the improvements on the state lease.

Leasehold value would appear to be diminished by the clause contained within the lease that provides for the ability for DSL to withdraw the lease with reasonable notice if that ability exists at any time rather than just at renewal.

Appendix B.

Alternative models for deriving market rental share from data on assignment sales of recreational property leases. These alternative models are ways that the computation of market rental rates can be made more accurate or appropriate. The discussion here leads through models that are increasingly complex but perhaps more realistic. All of these changes to the simple model discussed in the main text only increase the indicated market rental rate. This suggests that the simple model used leads to a clear understatement.

1. Definitions:

L = leasehold value
Ro = contract rental rate (3.5% in Montana)
V = appraised value
i = capitalization rate
Rm = market rental rate

All models assume that market value is given by appraised value and that rents are discounted to the present out to an infinite time horizon. Another variant would be to look at finite time horizons.

2. Model 1

This is the model presented in section 2.2. Assume leasehold value is of sufficient magnitude to make the sum of leasehold value and the present value of future contract rents equal to the market value. Assumes i = Rm.

$$L + (Ro * V)/i = V \qquad (1)$$

$$i = Ro\ (1 - L/V)^{-1} \qquad (2)$$

For data in Table 2 implies i = Rm = .066.

3. Model 2

Assume i not equal to Rm, given i. This model assumes that i and Rm are determined by different market forces. For example, Rm may be a function of relative supply and demand for rental versus fee simple property. The capitalization rate (i) may be more a function of the consumer rate of time preference. This may be more realistic than model 1, but requires an independent estimate of i.

$$L + (Ro * V)/i = (Rm * V)/i \qquad (3)$$

$$Rm = i(L/V) + Ro \qquad (4)$$

For data in Table 2 and for $i = .08$ to $.09$, implies $Rm = .072$ to $.077$. Of course consumer discount rates are much higher than 8 to 9 percent (for example interest rates on credit cards). A discount rate of $i = .15$ would imply an $Rm = .105$.

4. Model 3

Assume i not equal to Rm, given Rm. This model also starts with equation (3), but in this case Rm is known, not i.

$$i = (Rm - Ro)\,(L/V)^{-1} \qquad (5)$$

For data in Table 2 and for $Rm = .10$, implies $i = .14$.

5. Model 4

Another variant on these models is to use "effective" contract rate (Re) rather than the given contract rate. The "effective" contract rate for Montana in 1992 is about 2.0% (because appraisals used to compute contract rents are only about 57% of current appraisals for that year). This has no policy implications for Model 1, but it does for the other models. For example, a variant on model 3 is:

$$i = (Rm - Re)\,(L/V)^{-1} \qquad (6)$$

Using $Re = .020$ and the data in Table 2, and $Rm = .10$, implies $i = 17\%$.

In interpreting these alternative models, there are several results. For the range of Rm and i parameters suggested by Thomas Stevens, all of the alternative models indicate higher market rental rates than model 1. Accordingly, model 1 is the most conservative (and was used in the main text of this paper). Secondly, there is the question of which set of stylized assumptions are closest to reality. None of the models generate a Rm and i that are both consistent to Thomas Steven's estimates. This may be because of the specific definition of these terms in the present context. It would seem that Rm would be the parameter most easily and unambigously established through appraisal studies. If Rm is considered the most reliably estimated "given", one might lean toward a model like that in equation (6). The computed i is more consistent with the kind of discount rate observed in consumer studies which tend to be on the order of 20% and upwards. In other words, consumers tend to be shortsighted and discount the future heavily.

Consideration of finite time horizons and asset appreciation have been ignored in these models. At least in Model 1 these refinements don't matter in that all that counts is the amortization rate, not the mechanics of the underlying discount rate and asset appreciation expectations and time horizon that underly it.

FINAL REPORT

Montana Outfitter Survey: Land Use Fees and Trip Characteristics

Report for the Montana Department of State Lands

January, 1993

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EXECUTIVE SUMMARY

A phone survey of Montana outfitter and guides was undertaken in August-September 1992. The purpose of this survey was to estimate lease rates for outfitter hunting and fishing access on private lands in Montana. These lease rates are compared to rates negotiated in 1992 by Montana Department of State Lands (DSL) for outfitter licenses on state school trust lands.

A total of 416 outfitters were contacted. Most of these outfitters operate exclusively on public lands (84%). A subsample of 50 outfitters who operate on private lands participated in a survey. Approximately 10% of the outfitters focus on fishing, 16% on upland game birds and waterfowl and the remaining 75% on big game hunting. About half of the hunting is for deer and/or antelope and the remainder include elk as a target species.

The dominant form of pricing was on a per acre basis; 36 of such private leases were identified. The average per acre fee was $0.66, with a range of $0.03 to $2.00 per acre. The primary determinant of fee levels was the availability of elk hunting opportunities on a given lease. The average for deer/antelope and bird hunting leases was around $0.33 while leases including elk were three times as high, on average ($0.99 per acre). Almost all of these leases (97%) were for exclusive hunting rights.

DSL began a program of licensing outfitters in 1992. In the first year a total of 112 licenses were let for approximately $55,000 in total. Details were obtained on a subsample of these leases - for central and eastern Montana. In the central area, 36 licenses were issued for a total of 109,675 acres; the average per acre fee was $0.13. Nine of these were competitively bid and were licensed for $0.26/acre. The remainder of the licenses had only one applicant and went for $0.09/acre. In the eastern area, 27 licenses were negotiated with an average price of $0.09/acre.

It appears that DSL license fees are being let at rates below the market. The competitive bid fees are closest to market at $0.26/acre/ However, these are mostly (about 80% or more) for elk hunting areas and should be compared not to the average private lease rate ($0.33/acre) but to the average for elk hunting ($0.99/acre). A difficulty in comparing the DSL and market rates for outfitter access is that they differ in the degree to which other hunters and outfitters are excluded. With respect to other outfitters, 97% of the private, 50% of the central DSL and virtually all of the eastern DSL exclude other outfitters. However, on the state lands nonguided hunters continue to have access even if an outfitter lease exists on a given tract. The private market data does not provide information on how to value this qualitative difference in "exclusiveness".

Statistical models are reported that explain a significant share of the variation in outfitter lease rates and in the prices charged hunters. The key variables explaining lease rates are the presence of elk and the size of the leased area. The key variables explaining the prices the outfitters charge their clients are the presence of elk, the length of the trip in days, and the relative hunting success. For our subsample, the average fee per trip was $1,731.

Introduction

The Montana Department of State Lands began in 1992 to license outfitters to guide hunters on DSL lands. In the initial year of this licensing program license rates were set by DSL area managers through one-on-one negotiations with outfitters. In total 112 licenses were issued in this way in 1992.

In order to determine what price such hunting rights are commanding in the private market a survey of outfitters who leased private lands was undertaken.

This report details the information on private lease values gained through the outfitter survey. Additionally, preliminary information on the general numbers and prices of DSL outfitter licenses is presented for comparison with the private market figures.

Sample Frame and Procedures

The sample frame for this survey was the Montana outfitters and guides contained in the Montana Board of Outfitters listing of licensed outfitters, published by the Montana Department of Commerce on February 28, 1992. Those outfitters who provided either hunting or fishing services on other than public lands were included in the survey. The response rates of outfitters to the survey are summarized in Table 1.

A minimum of three attempts were made to contact each fishing or hunting outfitter in Montana. When an outfitter was contacted they were screened with an initial question: "do you provide your services on public or private land in Montana?" If an outfitter operated entirely on public land, they were thanked for their time and the survey was terminated. It was found that most outfitters (84 % of those contacted) operated exclusively on public land (Table 1). If, however, an outfitter provided services on private land, they were asked a series of questions about the services provided, and their land base. The structure of the interview was somewhat informal. The person conducting the interview talked with respondents about their operations. In the process of these interviews the following pieces of information were collected.

1) The name of outfitting business.

2) The Montana DFWP region where the outfitter operates.

3) The specific Montana DFWP hunting districts in which the outfitter operates.

4) The standard price charged to clients for a specific type of activity.

5) Whether that activity would be guided or not.

6) The total number of acres available for clients to use.

7) How the outfitter compensates the owner of the land for its use.

8) If a land-use fee is charged the outfitter, how much the outfitter must pay the landowner.

9) If a per-animal-taken fee is charged the outfitter, how much that fee is.

10) What target species are on the leased land.

11) The number of days a client is allowed use of the land and outfitting services for the price paid.

12) Typical size of elk taken on land, if any (antler point size, if bulls).

13) Typical success of clients in their hunting or fishing.

14) Typical spread of mule deer taken, if any.

15) Type of lodging offered, if any.

16) Type of food provided, if any.

17) Availability of fishing on lease.

18) Availability of bird hunting on lease.

19) Availability of bow hunting on lease.

20) Whether the outfitter is allowed exclusive rights to hunt on the tract of land.

The listing of variables associated with these questions, and the response categories to those questions is provided in Appendix A to this report. Some basic characteristic of the outfitters included in our sample and the trips which they offer are tabulated in Table 2.

Table 1. Survey Completion Rate Statistics.

Category	Sample Size
Number of outfitters surveyed with private land hunting or fishing operations	50
Number refusing to answer survey	17
Number of contacted outfitters who operated exclusively on public lands	349
Total number of outfitters contacted	416
Unable to contact after 3 tries / Bad phone numbers / no longer in business	160
Total number of outfitters in sample	576
Cooperation rate among outfitters contacted	96%
Number of Individual Land Leases Reported by Outfitters	99

Table 2. Basic Characteristics of Respondent Outfitters.

Characteristic	Statistic
Average Customer Price for a Guided Trip	$1731
Percent of Outfitters Offering Guided Trips	91%
Percent of Outfitters with Exclusive Rights to Hunt on Tract of Land	97%
Average Length of Customer Hunt	4.26 days
% of Outfitters Offering Lodging	78.3%
% of Outfitters Offering Meals	78.3%

Descriptive Statistics

The leases reported by outfitters participating the survey were distributed throughout every DFWP Region in Montana with concentrations in Region 3 (28%), Region 4 (27%), Region 7 (17%), and Region 5 (13%). The sizes of land tracts leased to outfitters varied widely in size from 500 acres to 140,000 acres with a mean of 27,262 acres.

The remainder of information gathered in the outfitter survey pertained to the type of outfitting services they provided for their clients. Frequency and summary information on this data is provided in Appendices B and C.

Table 3. Distribution of Sampled Private Land Leases Across DFWP Administrative Regions.

Region / Headquarters	Number of Leases	Percent of Sample
Region 1 / Kalispell	2	2.1%
Region 2 / Missoula	5	5.2%
Region 3 / Bozeman	27	27.8%
Region 4 / Great Falls	26	26.8%
Region 5 / Billings	13	13.4%
Region 6 / Glasgow	3	3.1%
Region 7 / Miles City	16	16.5%
Region 8 / Helena	5	5.2%

Table 4 provides a summary of the type of trips outfitters in our sample provide based on target species. Approximately 10% of the outfitters focus on fishing, 16% on upland birds and waterfowl, and 75% on big game hunting. For those specializing in big game hunting about 50% offer deer and or antelope hunts while the remaining 50% offer hunts that focus on or include elk as a target species. It is important to note that these are percentages of outfitters who do not operate exclusively on public lands, and thus may not be representative of the entire population of outfitters in Montana.

Table 4. Relative Frequency of Target Species.

Target Species or Species Group	Percentage
A. Detailed Species List	
Trout	9.1
Elk	9.1
Mule Deer	9.1
Whitetail Deer	5.1
Antelope	7.1
Upland Birds	14.1
Elk and Deer (Mule and Whitetail)	7.1
Mule Deer and Antelope	13.1
Mule Deer and Elk	11.1
Waterfowl	2.0
Bison	2.0
Deer (Both Species)	3.0
Deer, Elk, and Antelope	4.0
Elk, Deer, and Bear	1.0
Everything	2.0
Doe Mule Deer	1.0
B. Summary Species Groups	
Fishing	9.1
Birds and Waterfowl	16.1
Big Game Hunting	74.8
Deer and/or Antelope	38.5
Elk or Elk Combinations	34.3
Bison	2.0

Price Levels for Leased Land

One objective of this survey was to determine the range of prices which outfitters paid to landowners for the use of their land for hunting and fishing, and to determine the major factors which determine differences in those prices.

In total, 50 outfitters were interviewed, and these 50 provided information on 99 different tracts of land, or land use types.

In order to categorize the type of fee paid to landowners for the use of their land, outfitters were asked how their land fees were determined. The different classes of fee types and their frequencies were as follows:

1.	Per acre charge	(36 cases)
2.	Outfitter owned land / no charge	(31 cases)
3.	Per animal charge	(3 cases)
4.	Per hunter charge	(11 cases)
5.	Flat yearly rate + per animal charge	(4 cases)
6.	Percentage of gross revenue	(2 cases)
7.	Missing or refused to give information	(12 cases)

The majority of land fees are per acre charges. Although the sample size for several of the land fee categories is quite limited, the range of fees and mean fee for each class are shown in Table 5.

Outfitters were asked to characterize what they thought were the major determinants of the price charged for leased land. In general, there was agreement that the species hunted was the most important factor determining the land fee. In particular, the presence of elk on the land was cited as a major factor affecting the land fee.

Table 5. Range of Fees and Mean Fees, by Land Fee Type.

Type of Land Fee	N	Minimum Fee	Maximum Fee	Mean Fee
Per acre charge (Standard Deviation) (C.V.)[1]	36	0.03	2.00	0.66 (.477) (.72)
Per animal charge	3	50.00	200.00	150.00 (86.60) (.57)
Per hunter charge	11	10.00	1000.00	135.00 (287.52) (2.12)
Flat fee per year	4	500.00	3000.00	2375.00 (1250) (.52)
Percent of gross	2	10%	20%	15% (.07) (.47)

[1] C.V. is the coefficient of variation which is defined as the standard deviation divided by the mean.

In order to further disaggregate the per acre charges, three classes of land use were created: bird hunting only, big game hunting exclusive of elk, and big game hunting including elk. Table 6 shows the per acre fees associated with these three classes of hunts.

The data presented in Table 6 is consistent with the view that the type of species hunted has an important influence on lease rates. Leases which provide opportunities for elk hunting appear to cost about three times as much per acre ($0.99/acre) compared to leases for other types of hunting ($0.30 and $0.35/acre) (Table 6). These differences are statistically significant at the 1% level. It can be seen that there is a substantial difference in the mean fee per acre charged for land with and without elk present as a huntable species.

Table 6. Per Acre Land Fees, by Type of Species Hunted.

Species Hunted	N	Minimum Fee	Maximum Fee	Mean Fee
Big Game Including Elk	18	0.30	2.00	0.99[•]
(Standard Deviation)				(.393)
(C.V.)				(.398)
Big Game Excluding Elk	12	0.03	1.00	0.35
				(.346)
				(.992)
Game Birds / Waterfowl	6	0.15	0.60	0.30
				(.159)
				(.539)
All Species Excluding Elk	18	0.03	1.00	0.33[•]
				(.29)
				(.88)

[•] The mean values of the of the big game including elk and the all species excluding elk categories are significantly different at the 95 percent level of confidence.

Montana Department of State Lands Outfitter Licenses

In 1992 the Montana DSL began a program of licensing outfitters to use school trust lands for guided hunting. In this first year of the licensing program DSL area managers negotiated license terms and fees with individual outfitters. In total, 112 licenses were issued for which approximately $55,000 was paid to Montana DSL. Conversations with DSL area managers in Miles City and Helena provided area averages and anecdotal information for two of the largest areas in the state for DSL outfitter licensing.

When an outfitter applied for a license on a specific tract of land, they noted on the application whether they were applying for exclusive or nonexclusive use of the land. Exclusive use allows only one outfitter to be licensed on that tract while nonexclusive allows for multiple outfitters per tract. One State Lands area manager expressed doubt as to whether the exclusive/nonexclusive dichotomy was meaningful in many cases. Often, the parcel of state land is an inholding surrounded by private land. Thus, this has the effect of giving exclusive status to those who have access to the private parcel independent of whether the state land license is exclusive or nonexclusive. If more than one application for exclusive use on a tract was received the applicants were asked to submit a bid for the license. The majority of tracts were not bid competitively, but rather license fees were set through face to face negotiations with the area manager.

In the eastern area, 27 licenses were negotiated with outfitters. The largest of these was for access to a 64,000 acre block of state land. The negotiated price of this license was $5000 or about $0.08/acre. In general, the average size of blocks for which licenses were issued in the eastern area were in the 2000-8000 acre range, and license fees ranged from $200 to $1000. The average fee per acre across the 27 eastern area licenses was 9 cents per acre.[1] The area manager for the eastern area noted that he explained to many licensees that the license fees could be significantly higher in the second and subsequent years of the program. He said that he recognized that due to the tight time frame under which licenses were negotiated in this first year of the program, State Lands was not receiving the maximum value from the licenses. He further said that he expected some license fees, for example the 64,000 acre block mentioned above, to as much as double next year.

In the central area, 36 licenses were issued for use of lands totalling 109,675 acres. On average licenses on these lands were issued for 13 cents per acre. There was however a significant difference between the average per acre license fee paid for lands which had more then one outfitter bidding for access and those with a single outfitter applying for a license. For the 9 DSL tracts which had more than one outfitter applicant, an average fee of 26 cents per acre was paid. For those tracts which only had a single applicant, an average of 9 cents per acre was paid.[2]

Comparison of State Lands Outfitter Fees to Private Market Fees

Both the sample sizes for the State Lands outfitter licenses and the private hunting leases are limited so caution must be taken in comparing the figures. No attempt has been made to control for differences in quality of hunting or the exclusivity of the hunting experience has been made. In general, however, the State lands license fees seem to be substantially lower than the private lease rates. As is shown in Table 6, private lease prices ranged from 30 to 99 cents per acre. The only State Lands licenses which approached this range were those licenses which were competitively bid. This group of 9 central area licenses averaged 26 cents per acre. Table 7 shows a comparison between the eastern area, central area, and outfitter sample leases in price and exclusivity of leases. An important difference between the state and private outfitter leases is that private leases will generally exclude not only other outfitted hunters, but all other private party hunters. By contrast, state leases in principle still remain accessible to nonguided hunters who have purchased the state lands recreational use license.

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[1] These statistics were received via phone conversation with Area Manager Dwayne Andrews.

[2] Statistics received via phone from Area Manager Mark Ahner.

Table 7. Comparison of Characteristics of Private Land Leases and Montana Department of State Lands Outfitter Licenses.

Statistic	Eastern DSL Area	Central DSL Area	Private Leases[1]
Number of Leases / Licenses	27	36	36
Average fee per Acre	9 cents	13 cents	66 cents
% Exclusive[2] - of outfitters	all	approx. 50%	97%
- of the public	0	0	97%

[1] The private leases used in this table were only those for which a $/acre fee was charged.
[2] Note that some of the state lands which are not shown to be exclusive of the public may be de facto exclusive due to the parcel being a completely surrounded inholding.

Modeling of Land Lease Fees and Customer Trip Prices

Several of the variables collected in the Montana outfitter survey were used to build 2 explanatory models: one explaining the price per acre charged for leases and the other explaining the price outfitters charge their customers. Both modeling efforts were successful in building models with significant explanatory power.

The first model estimated was one explaining the price per acre charged for leases as a function of a number of explanatory variables. From a theoretical economic standpoint, huntable terrain is an input to the production of "hunts" or hunting experiences. One would expect the price paid for these inputs would be a function of the type of hunt, the "productivity" of the hunt (success rate), and the price the hunts are sold for. We also included acres, although the predicted sign on the variable is ambiguous - larger acres may mean higher quality (more diverse, less congested) hunts or there could be a "quantity discount " effect. On this *a priori* basis we believed that the following variables might be significant in explaining price.

ACRES = the number of acres included in the lease
ELK = a dummy variable indicating whether elk were hunted on the land being leased
SUCC = a dummy variable indicating whether the outfitter rated hunting or fishing as excellent or better
CUSTPRIC = the price charged the customer for a trip on the land

Table 8 shows the estimated coefficients for this model as well as for the reduced model containing only those variables which proved to be significant in the model. The two explanatory variable in the reduced model (ACRES and ELK) are both significant at the 95% level. The sign of ELK is positive, as one would expect; the sign on ACRES is negative which suggests a quantity discount effect. We expected that elk, being a highly valued game species, would significantly add to the value of land leased for hunting. The adjusted R^2 for the model of 0.538 indicates that the model explains more than 50% of the variation in lease charges per acre.

Table 8. Multivariate model of Land Fees.

Variable / Statistic	Complete Model	Reduced Model
Intercept	0.550	0.487
(t-stat)	(3.69)	(4.85)
ACRES	-0.00000055	-.0000052
	(-2.50)	(-2.40)
ELK	0.516	0.599
	(4.16)	(5.39)
SUCC	-0.061	--
	(-0.47)	
CUSTPRIC	0.000014	--
	(0.24)	
Adjusted R^2	0.534	0.538
Sample Size	29	35

A second model which was estimated to explain variation in the prices which outfitters charge their clients for trips on leased land. This model is single equation type of hedonic price model (see Ward and Duffield, 1992). In these types of models price is the dependent variable and the explanatory variables are characteristics of the good. The following explanatory variables were included in the model.

ACRES = number of acres in lease
ELK = dummy for elk as a hunted species
DAYS = Number of days the hunt lasts
SUCC = dummy for excellent success in hunting or fishing
SLEEP = dummy for whether the outfitter supplies lodging

Table 9 shows the estimated complete and reduced models. The reduced form of this model shows three explanatory variables (ELK, DAYS, and SUCC) with the expected signs. We expected that the presence of elk as a target species, longer trips, and higher success rates would be associated with higher priced trips. The model shows this to be the case. The ELK and DAYS variables are significant at the 95% level of significance, and the SUCC variable is significant at the 85% level. The provision of lodging and the size of the area hunted were not statistically significant variables. As with the previous model, this model explains a significant portion of the variation in the prices charged by the outfitters, as shown by the estimated adjusted R^2 of 0.654.

Table 9. Multivariate models of Customer Prices Charged for Hunting on Leased Land.

Variable / Statistic	Complete Model	Reduced Model
Intercept (t-stat)	-524.72 (-0.85)	-362.28 (-1.15)
ACRES	0.0060 (1.31)	--
ELK	621.97 (2.53)	560.51 (2.35)
DAYS	358.51 (5.93)	336.57 (6.35)
SUCC	356.07 (1.40)	382.01 (1.54)
SLEEP	-97.99 (-0.15)	--
Adjusted R^2	0.650	0.654
Sample Size	26	26

APPENDIX A: Variable Names and Response Categories

Listing of Variable Names and Value Labels Associated with the Montana Outfitter Data Set.

OUTFITTER	NAME OF OUTFITTER
REGION	DFWP REGION #
AREA	DFWP HUNTING AREA
CUSTPRIC	PRICE CHARGED CUSTOMERS
GUIDED	0= NO 1=YES
ACRES	# OF ACRES AVAILABLE TO HUNT ON
FEE TYPE	1= PER ACRE CHARGE 2= OWNER LAND 3= PER ANIMAL KILLED 4= MISSING 5= PER HUNTER 6= FLAT FEE & PER ANIMAL 7= PERCENTAGE OF GROSS 9= REFUSED ANSWER
LAND FEE	AMOUNT PAID TO LANDOWNER
ANIMAL FEE	AMOUNT PAID PER ANIMAL KILLED
TARGET SPECIES	0= TROUT 1= ELK 2= MULE DEER 3= WHITE TAIL DEER 4= ANTELOPE 5= UPLAND BIRDS 6= ELK & DEER, MULE & WHITE TAIL 7= MULE DEER & ANTELOPE 8= MULE DEER & ELK 9= WATERFOWL 10= BISON 11= MULE & WHITE TAIL DEER 12= DEER, ELK, ANTELOPE 13= ELK, DEER, BEAR 14= EVERYTHING 15= DOE MULE

DAYS	NUMBER OF DAYS HUNTER ALLOWED TO HUNT
ELK SIZE	0= NO ANSWER 1= 1 x 1 2= 2 x 2 3= 3 x 3 4= 4 x 4 5= 5 x 5 6= 6 x 6
SUCCESS	9= REFUSED ANSWER 1= POOR 2= FAIR 3= GOOD 4= EXCELLENT 5= TROPHY ANIMALS ARE TAKEN REG. 6= ONLY TROPHY ANIMALS ARE TAKEN ALL ELK WOULD BE 6 x 6 OR BETTER
MULE SIZE	SIZE OF MULE DEER SPREAD IN INCHES
LODGING	1= FIRST CLASS 2= MOTEL OR RANCH HOUSE 3= TENT OR CABINS 9= REFUSED ANSWER 0= NO LODGING
FOOD	1= FIRST CLASS 2= MOTEL OR RANCH HOUSE FOOD 3= OUTDOOR COOKING 4= REFUSED ANSWER 5= LUNCH 0= NO FOOD
BOW	0= NO 1= YES IS THIS THE PRICE FOR ARCHERY SEASON

FISHING	0= NO FISHING 1= NO ADDITIONAL CHARGE FOR FISHING 2= SAME SPECIES
BIRDS	0= NO BIRD HUNTING 1= NO ADDITIONAL CHARGE FOR UPLAND BIRD OR WATERFOWL HUNTING 2= SAME SPECIES

APPENDIX B: Frequency Distribution of Responses to Outfitter Survey Questions

```
                                          Cum.         Cum.
REGION   Frequency   Percent     Frequency      Percent
-----------------------------------------------------
     1           2       2.1             2          2.1
     2           5       5.2             7          7.2
     3          27      27.8            34         35.1
     4          26      26.8            60         61.9
     5          13      13.4            73         75.3
     6           3       3.1            76         78.4
     7          16      16.5            92         94.8
     8           5       5.2            97        100.0

               Frequency Missing = 2
```

```
                                 Cumulative   Cumulative
AREA   Frequency   Percent    Frequency      Percent
-----------------------------------------------------
 102           1       1.5            1          1.5
 170           1       1.5            2          3.0
 290           3       4.5            5          7.5
 311           4       6.0            9         13.4
 312           1       1.5           10         14.9
 314           2       3.0           12         17.9
 315           5       7.5           17         25.4
 322           3       4.5           20         29.9
 325           2       3.0           22         32.8
 331           1       1.5           23         34.3
 332           2       3.0           25         37.3
 340           1       1.5           26         38.8
 411           1       1.5           27         40.3
 412           2       3.0           29         43.3
 445           6       9.0           35         52.2
 446           5       7.5           40         59.7
 510           1       1.5           41         61.2
 520           1       1.5           42         62.7
 570           2       3.0           44         65.7
 575           1       1.5           45         67.2
 580           3       4.5           48         71.6
 590           1       1.5           49         73.1
 600           2       3.0           51         76.1
 680           1       1.5           52         77.6
 700          11      16.4           63         94.0
 702           2       3.0           65         97.0
 835           1       1.5           66         98.5
 843           1       1.5           67        100.0

              Frequency Missing = 32
```

```
                                                Cum.           Cum.
 CUSTPRIC    Frequency    Percent     Frequency      Percent

-----------------------------------------------------------------
       35           1        1.2             1          1.2
       60           1        1.2             2          2.4
       75           1        1.2             3          3.7
       80           1        1.2             4          4.9
      175           2        2.4             6          7.3
      200           1        1.2             7          8.5
      220           1        1.2             8          9.8
      250           1        1.2             9         11.0
      260           1        1.2            10         12.2
      265           1        1.2            11         13.4
      270           1        1.2            12         14.6
      300           5        6.1            17         20.7
      340           1        1.2            18         22.0
      350           1        1.2            19         23.2
      375           1        1.2            20         24.4
      380           1        1.2            21         25.6
      480           1        1.2            22         26.8
      500           2        2.4            24         29.3
      600           1        1.2            25         30.5
      750           6        7.3            31         37.8
      850           2        2.4            33         40.2
      950           1        1.2            34         41.5
     1000           1        1.2            35         42.7
     1100           1        1.2            36         43.9
     1200           4        4.9            40         48.8
     1250           1        1.2            41         50.0
     1400           1        1.2            42         51.2
     1500           2        2.4            44         53.7
     1600           2        2.4            46         56.1
     1750           3        3.7            49         59.8
     1800           1        1.2            50         61.0
     1900           2        2.4            52         63.4
     1925           1        1.2            53         64.6
     2000           5        6.1            58         70.7
     2100           1        1.2            59         72.0
     2200           1        1.2            60         73.2
     2250           1        1.2            61         74.4
     2300           1        1.2            62         75.6
     2500           7        8.5            69         84.1
     2650           2        2.4            71         86.6
     2850           1        1.2            72         87.8
     3000           2        2.4            74         90.2
     3150           1        1.2            75         91.5
     3500           2        2.4            77         93.9
     3800           1        1.2            78         95.1
     4250           1        1.2            79         96.3
     8500           1        1.2            80         97.6
```

```
   10500            1        1.2           81        98.8
   11500            1        1.2           82       100.0

                    Frequency Missing = 17



                                        Cumulative  Cumulative
  GUIDED   Frequency   Percent   Frequency    Percent
  ------------------------------------------------------------
       0          9       9.1            9         9.1
       1         90      90.9           99       100.0



                                        Cumulative  Cumulative
   ACRES   Frequency   Percent   Frequency    Percent
  ------------------------------------------------------------
     500          1       1.1            1         1.1
     640          1       1.1            2         2.3
     960          1       1.1            3         3.4
    1000          1       1.1            4         4.6
    1100          3       3.4            7         8.0
    1280          2       2.3            9        10.3
    1300          4       4.6           13        14.9
    1500          1       1.1           14        16.1
    2500          3       3.4           17        19.5
    3840          1       1.1           18        20.7
    4000          3       3.4           21        24.1
    5000          1       1.1           22        25.3
    5600          3       3.4           25        28.7
    7000          2       2.3           27        31.0
    7680          1       1.1           28        32.2
   10000          9      10.3           37        42.5
   12000          5       5.7           42        48.3
   12160          2       2.3           44        50.6
   13000          1       1.1           45        51.7
   15000          2       2.3           47        54.0
   16000          2       2.3           49        56.3
   20000          4       4.6           53        60.9
   25000          5       5.7           58        66.7
   27000          1       1.1           59        67.8
   30000          5       5.7           64        73.6
   32000          2       2.3           66        75.9
   40000          1       1.1           67        77.0
   43000          2       2.3           69        79.3
   50000          6       6.9           75        86.2
   70000          1       1.1           76        87.4
   80000          3         3.4           79         90.8
   90000          1         1.1           80         92.0
  100000          2         2.3           82         94.3
  107000          4         4.6           86         98.9
  140000          1         1.1           87        100.0

               Frequency Missing = 12



                                    Cumulative  Cumulative
FEETYPE   Frequency   Percent   Frequency    Percent
----------------------------------------------------
      1          36      37.1           36       37.1
      2          31      32.0           67       69.1
      3           3       3.1           70       72.2
      4          10      10.3           80       82.5
      5          11      11.3           91       93.8
      6           4       4.1           95       97.9
      7           2       2.1           97      100.0

               Frequency Missing = 2



                                      Cum.      Cum.
  LANDFEE   Frequency   Percent   Frequency  Percent
  --------------------------------------------------
      0.00          45      45.5          45     45.5
      0.03           2       2.0          47     47.5
      0.10           1       1.0          48     48.5
      0.11           1       1.0          49     49.5
      0.12           1       1.0          50     50.5
      0.15           2       2.0          52     52.5
      0.20           4       4.0          56     56.6
      0.25           1       1.0          57     57.6
      0.26           1       1.0          58     58.6
      0.30           2       2.0          60     60.6
      0.31           1       1.0          61     61.6
      0.45           1       1.0          62     62.6
      0.46           1       1.0          63     63.6
      0.50           1       1.0          64     64.6
      0.60           3       3.0          67     67.7
      0.80           1       1.0          68     68.7
      1.00          14      14.1          82     82.8
      1.75           1       1.0          83     83.8
      2.00           1       1.0          84     84.8
     10.00           1       1.0          85     85.9
```

```
             35.00          1        1.0           86     86.9
             40.00          1        1.0           87     87.9
             45.00          1        1.0           88     88.9
             50.00          4        4.0           92     92.9
             60.00          1        1.0           93     93.9
            100.00          1        1.0           94     94.9
            500.00          1        1.0           95     96.0
           1000.00          1        1.0           96     97.0
           3000.00          3        3.0           99    100.0



                                              Cum.        Cum.
     ANIMALFE   Frequency   Percent    Frequency     Percent

   ---------------------------------------------------
            0          93      93.9          93       93.9
           50           2       2.0          95       96.0
          200           2       2.0          97       98.0
          210           1       1.0          98       99.0
          250           1       1.0          99      100.0



                                              Cum.        Cum.
     EXLUSIVE   Frequency   Percent    Frequency     Percent

   ---------------------------------------------------
            0           3       3.0           3        3.0
            1          96      97.0          99      100.0



                                              Cum.        Cum.
     TARGETSP   Frequency   Percent    Frequency     Percent

   ---------------------------------------------------
            0           9       9.1           9        9.1
            1           9       9.1          18       18.2
            2           9       9.1          27       27.3
            3           5       5.1          32       32.3
            4           7       7.1          39       39.4
            5          14      14.1          53       53.5
            6           7       7.1          60       60.6
            7          13      13.1          73       73.7
            8          11      11.1          84       84.8
            9           2       2.0          86       86.9
```

```
        10          2       2.0          88        88.9
        11          3       3.0          91        91.9
        12          4       4.0          95        96.0
        13          1       1.0          96        97.0
        14          2       2.0          98        99.0
        15          1       1.0          99       100.0



                                Cumulative  Cumulative
    DAYS   Frequency   Percent   Frequency    Percent
    ---------------------------------------------------
       1         21      28.8          21        28.8
       2          1       1.4          22        30.1
       3          9      12.3          31        42.5
       5         18      24.7          49        67.1
       6          5       6.8          54        74.0
       7         15      20.5          69        94.5
       8          2       2.7          71        97.3
      10          2       2.7          73       100.0

                  Frequency Missing = 26



                                 Cumulative  Cumulative
  ELKSIZE   Frequency   Percent   Frequency    Percent
  -----------------------------------------------------
        4          6      75.0           6        75.0
        5          2      25.0           8       100.0

                  Frequency Missing = 91



                                      Cum.       Cum.
 SUCCESS     Frequency   Percent   Frequency    Percent

-------------------------------------------------------
         .          2       2.0           2        2.0
 1                  1       1.0           3        3.0
 2                  6       6.1           9        9.1
 3                 19      19.2          28       28.3
 4                 59      59.6          87       87.9
 5                  9       9.1          96       97.0
 6                  3       3.0          99      100.0
```

```
                                                Cum.       Cum.
MULESIZE   Frequency    Percent    Frequency    Percent

-------------------------------------------------------
      18           1        7.7            1        7.7
      22           2       15.4            3       23.1
      24           1        7.7            4       30.8
      25           3       23.1            7       53.8
      26           4       30.8           11       84.6
      28           2       15.4           13      100.0

                 Frequency Missing = 86


                                 Cumulative  Cumulative
  FOOD   Frequency    Percent     Frequency    Percent
  ---------------------------------------------------
     0          20       21.7            20       21.7
     1           6        6.5            26       28.3
     2          44       47.8            70       76.1
     3          19       20.7            89       96.7
     5           3        3.3            92      100.0

                 Frequency Missing = 7


                                   Cumulative  Cumulative
LODGING    Frequency    Percent     Frequency    Percent
-------------------------------------------------------
      0           20       21.7            20       21.7
      1            6        6.5            26       28.3
      2           44       47.8            70       76.1
      3           22       23.9            92      100.0

                 Frequency Missing = 7
```

```
                                   Cumulative  Cumulative
  BOW     Frequency     Percent     Frequency    Percent
  -------------------------------------------------------
   0            87        88.8            87        88.8
   1             5         5.1            92        93.9
   2             6         6.1            98       100.0

                 Frequency Missing = 1


                                       Cumulative  Cumulative
  FISHING     Frequency     Percent     Frequency    Percent
  -----------------------------------------------------------
        0            81        84.4            81        84.4
        1             8         8.3            89        92.7
        2             7         7.3            96       100.0

                 Frequency Missing = 3


                                     Cumulative  Cumulative
  BIRDS     Frequency     Percent     Frequency    Percent
  ---------------------------------------------------------
      0            71        74.0            71        74.0
      1            13        13.5            84        87.5
      2            12        12.5            96       100.0

                 Frequency Missing = 3
```

APPENDIX C: Descriptive Statistics for Outfitter Survey Variables

Descriptive Statistics for Outfitter Survey Variables

```
N Obs  Variable   N       Minimum       Maximum          Mean       Std Dev
---------------------------------------------------------------------------
   99  REGION    97     1.0000000     8.0000000     4.4536082     1.7501227
       AREA      67   102.0000000   843.0000000   473.4925373   171.5008943
       CUSTPRIC  82    35.0000000      11500.00       1731.28       1962.94
       GUIDED    99             0     1.0000000     0.9090909     0.2889428
       ACRES     87   500.0000000     140000.00      27262.07      32107.85
       FEETYPE   97     1.0000000     7.0000000     2.4742268     1.6776272
       LANDFEE   99             0       3000.00   111.2592929   525.4064481
       ANIMALFE  99             0   250.0000000     9.6969697    43.1290078
       EXLUSIVE  99             0     1.0000000     0.9696970     0.1722922
       TARGETSP  99             0    15.0000000     5.4141414     3.6839700
       DAYS      73     1.0000000    10.0000000     4.2602740     2.5659490
       ELKSIZE    8     4.0000000     5.0000000     4.2500000     0.4629100
       MULESIZE  13    18.0000000    28.0000000    24.6923077     2.7198228
       FOOD      92             0     5.0000000     1.8043478     1.1882125
       LODGING   92             0     3.0000000     1.7391304     1.0573611
       BOW       98             0     2.0000000     0.1734694     0.5182347
       FISHING   96             0     2.0000000     0.2291667     0.5708565
       BIRDS     96             0     2.0000000     0.3854167     0.7014240
---------------------------------------------------------------------------
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FINAL REPORT

SURVEY OF WESTERN STATE LAND MANAGERS

Submitted to Montana Department of State Lands
December 1992

James Boyer
John Duffield

Bioeconomics, Inc.
Missoula, Montana

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EXECUTIVE SUMMARY

Introduction

This report describes the results of a survey of land managers in the state lands departments of 22 western states. The purpose of this survey was to examine surface land management and land use practices used by other western states as one approach to examining policy options for state lands management in Montana. The focus here is on grazing, cropland, commercial, recreational and cabin uses. Additionally, some generic issues are addressed, including interpretation of the constitutional mandate that guides state lands management and choices concerning sales, acquisition and exchanges of lands. This study is one element of a larger project to examine values and procedures for obtaining fair market value for surface land uses of school trust lands in Montana.

The survey was conducted during June-August 1992 by James Boyer.

In this report we suggest possible changes that may have the potential for increasing the revenues achieved on state lands. Our focus is on highlighting policy options that may be worthy of further consideration. A comparison of alternative approaches to management across states is in some ways simplistic. Circumstances, institutional setting, market prices for resources and resource qualities will vary considerably from state to state. One can not simply assert that because a given policy works in one state, that it will work the same way in Montana. Nonetheless, there is a great deal to be learned by looking at the experience in other states. At a minimum, examining management approaches in other states greatly helps to enrich and define the options that are at least plausible for Montana to consider. This study is not a substitute for studies of fair market value and land management alternatives specific to Montana, but rather is intended to put such studies in a larger perspective.

Policy Options Recommended for Legislative Consideration

In this section we briefly summarize policy options that appear promising for further consideration by the State of Montana. Our criteria for including a given option is simply that it has proved successful in other states and would be likely to increase revenues to Montana's school trust fund. The latter would seem to be a compelling justification for any given change and is consistent with the so-called doctrine of "undivided loyalty". This doctrine is simply the view that state lands should be managed with only one constituency in mind, in this case the beneficiaries of the trust (students in Montana's schools).

We explictly note our criteria because it is fairly narrow, and (given many current policies) perhaps politically unworkable. In fact, other considerations inevitably arise in setting policy for managing state lands. An important issue tends to be the well-being of the leasor. Certain policy changes may negatively impact, for example, long-time holders of state grazing leases or families that have held cabin leases for many years. Every dollar raised for the trust is inevitably a dollar extracted from some other constituency. Ultimately only the legislature can make choices that tradeoff the well-being of trust beneficiaries against other groups.

The following summary recommendations are based on trust land administrative policies of other western states. Details on each of these ideas, including identification of the states where the policy is practiced, is provided in the main body of the report.

Funding of State Land Administration

1. State administration of trust lands should be funded from the income generated by the lands (e.g. 1 percent of revenues from state lands), rather than by legislative appropriation. For Montana to cultivate and administer more profitable uses of trust lands, it must increase the breadth and sophistication of the land management services it provides. DSL will need to strengthen internal staff capabilities and, in some instances, retain outside specialists to establish and manage more intense and lucrative uses of trust lands.

The transition from an appropriated budget to a self-funding agency should be phased in over a period of years (e.g. 4 years). Self-funding would allow the State Lands' agency budget and staffing to grow commensurate with the additional income it generates for the trust fund, creating incentive for aggressive-moneymaking land management practices by state personnel. Self-funding of DSL land management activities would also free up general fund monies for other uses.

Land Sales, Exchanges and Purchases

1. DSL should be authorized to use revenues from sales of state lands to purchase replacement lands for the school trust. DSL should then sell off less profitable parcels and use these revenues to purchase new lands which will generate significantly greater long-term income for the trust.

2. The legislature should authorize DSL to establish a "Land Banking," system. Such a land bank would allow income from sales of trust lands be placed in an escrow account. Escrow account revenues could subsequently be used to purchase new higher value replacement lands for the trust. If land sale revenues were not used to purchase replacement lands within a specified time, for example 2 years, they would be transferred to the permanent trust fund.

3. The state should execute land purchases and exchanges which consolidate its land holdings. The objective of the land acquisitions should be to create fewer, but significantly larger parcels. In addition, the state should seek holdings which are accessible by public roads. Road access will increase the likelihood of in competitive bidding for agricultural leases and also insure access for recreational users (which should increase sales of state land recreational permits).

4. When land sales are made, the state should receive at least "full market" value for the land. Montana should not sell or exchange mineral rights as part of a sale or exchange of surface lands, except where it is confident that it will acquire mineral rights of equivalent or greater value. The costs and time necessary to accurately evaluate subsurface mineral development potential would greatly impair sales and exchanges of surface lands.

5. The state should not sell state trust lands at below market value to local governments or schools. State lands within urbanizing areas are potentially the most profitable surface rights belonging to the school trust. Selling this land could result in major long-term loss of income for the trust. The only way the state should sell these properties if it is fully compensated for the "full market value" of the land, based on its "highest and best use".

Agricultural Lands

1. In some states, minimum grazing and cropland lease fees are set at the rates for comparable privately owned land. Minimum rates can be based on USDA surveys of land rents within an agricultural region. Adjustment of fees could be considered for the absence of fencing and other factors which cause operation costs to be higher on public lands. States with much higher AUM rates than Montana continue to lease all of their state lands.

States which base grazing fees on actual studies of lease rates for comparable private lands tend to have higher lease rates than states using formula systems. Where states use market comparisons to set lease rates, they are able to vary minimum fees to account for regional and local differences in costs of ranching and market conditions. Montana, and other states which use formulas to set minimum grazing fees, set minimum fees to accommodate for worst case statewide grazing conditions. This approach undervalues the state's productive grazing lands.

2. Where states have been able to encourage competitive bidding for grazing and cropland leases, they tend to achieve considerably higher rents from their leases. State leases should be awarded to the highest bid at public auction. Montana should diligently advertise when leases are up for bid. States which have eliminated the preference right system (for lease renewal) tend to have higher lease rates. Leaseholder preference rights have the effect of discouraging competition for leases and have been found to be unconstitutional in some other states.

3. Based on the experience in other states, cropland leases based on cash rents appear to yeild higher revenues than crop share systems. Cash rents could be a fixed payment, irrespective of year-to-year use of land or land productivity. Montana and the few other states which are still using crop shares are unable to effectively monitor production on state tracts. On the other hand, it is possible that the "honor system" is working.

4. The state could sell or exchange it less profitable agricultural parcels. The focus should be on selling or exchanging state lands where competitive bidding for grazing or cropland

leases is unlikely (these are often lands which are not accessible by public roads). Montana receives only about $1.00 per acre per year for grazing leases (4.3 million acres). As a simplified example, selling land at even $50 an acre and investing revenues at 6 percent would produce three times the states current annual return. (These are conservative estimates of sale prices and investment returns.) This issue would, of course, require detailed study.

5. The state should use land exchanges and purchases to acquire large grazing and cropland tracts that can be leased as single agricultural units. Larger land parcels are more likely to attract competitive bidding. The state should strive to acquire agricultural lands which are accessible by public roads, in order to increase the likelihood of competitive bidding for leases.

6. The legislature should require that the state trust receive all or nearly all of the "sandwich" profits resulting from the subleasing of trust lands. When leaseholders are able profit from subleases, it is apparent that state agricultural land leases are being awarded at less than market value.

Commercial Land Development

1. Some states aggressively pursue commercial development where this is the highest and best use of a given tract of state land. DSL field offices could conduct assessments of all state owned lands for the purpose of identifying parcels with significant potential for commercial, residential, or other higher return uses. The DSL could develop and implement long-range plans for encouraging commercial and other land uses which increase trust income.

2. The DSL could use revenues from less profitable state tracts to purchase replacement parcels with commercial development potential. Where it is advantageous for the trust, the state could also acquire ownership of commercial improvements located on state lands, such as golf courses and even major buildings.

3. Experience is mixed in other states with regard to development of single family homes, due to the high costs of administering such programs and the problems of homeowners obtaining financing for construction on leased property. It appears that the state should sell properties suitable for single family home development rather than attempt to develop and lease these properties to individual home owners. Some states are successfully leasing property for apartment-type development, and Montana could consider this option where appropriate.

4. The state should concentrate resources on development of a few large commercial projects in lieu of numerous small projects. By implementing a few large projects a year, the state will minimize its administrative cost and maximize trust fund profits.

5. Some states receive an annual rent of 8 to 10 percent of the market value its commercial lands and as well as a small percent of the gross sales (1-2 percent) for large commercial projects. This could be a target return for Montana.

6. The state should coordinate land use planning with local governments. Local government planning and public works agencies should be involved in the analysis of land use alternatives, land use planning, and implementation of transitions to commercial and other high value uses of state lands.

Recreational Uses

1. Where the state holds publicly accessible parcels containing potentially productive wildlife and fish habitat, it should implement land management practices which enhance hunting and fishing resources. This practice will likely increase sales of state land recreational permits and also increase guiding permit sales to outfitters.

2. The state should consolidate trust land holdings to create larger, more publicly accessible tracts. This is also likely to increase recreation permit sales and permit sales to outfitters.

Cabin Leases

1. Montana DSL should carefully plan for and implement development of additional lands suitable for recreational home sites. The state should allow only developments which are compatible with its overall plans for an area. The state should practice the clustering of new leases in order to maximize revenues, minimize environmental effects, and provide for administrative efficiency. Commercial leases should be allowed where they would generate additional revenue for the trust, provided they are compatible with the state's overall development plans for an area. The Department of State Lands should coordinate its cabin lease plans with activities of other local, state, and federal government agencies.

2. Due to increasing market values for Western Montana recreational properties, the DSL, Department of Revenue, and the legislature will likely experience pressures to reset appraisal values and reduce the lease rate. Yearly rents for cabin site leases are currently set as 3 1/2 percent of appraised value, as determined by the Montana Department of Revenue. In Minnesota, the rate is 5 percent, but in Idaho 2 1/2 percent. If upcoming DOR appraisals accurately reflect selling prices for comparable privately owned recreation properties, many existing lease holders will soon be experiencing major increases in their annual rents. Instead of paying $250 a year, annual rents on some properties will be $1,000 to $3,000 a year. The higher rents are likely to create financial burden for some lease holders. Nonetheless, the higher lease rates will more accurately reflect the true value of the land being leased from the state.

3. As with agricultural leases, the trust should receive profits resulting from the subleasing of state owned cabin leases. As with agricultural lease, any subleasing of a cabin site could

receive formal approval from the state, to insure the trust is being properly compensated for the value of its land.

Using State Lands for Environmental Mitigation

1. Trust lands could be made available for purchase or lease by public and private entities seeking lands to mitigate environmental impacts. Construction of highways, transmission lines, and other major public and private facilities often require public acquisition and subsequent preservation of lands with particular environmental qualities. The trust has considerable holdings which could be used for this purpose. The state should receive "full market value," for lands used for environmental mitigation.

A. INTRODUCTION

1. Purpose of Study

This report describes the results of a survey of land managers for state lands departments in 22 western states. The purpose of this study is to examine surface land management and land use practices used by other western states as one approach to examining policy options for state lands management in Montana. The focus here is on grazing, cropland, commercial, recreational and cabin uses. Additionally, some generic issues are addressed, including interpretation of the constitutional mandate that guides state lands management and choices concerning sales, acquisition and exchanges of lands. This study is one element of a larger project to examine values and procedures for obtaining fair market value for surface land uses of school trust lands in Montana.

In this report we suggest possible changes that may have the potential for increasing the revenues achieved on state lands. This report stops short of specifically recommending any given change in policy. Rather our focus is on highlighting policy options that may be worthy of further consideration. A comparison of alternative approaches to management across states is in some ways simplistic. Circumstances, institutional setting, market prices for resources and resource qualities will vary considerably from state to state. One can not simply assert that because a given policy works in one state, that it will work the same way in Montana. Nonetheless, there is a great deal to be learned by looking at the experience in other states. At a minimum, examining management approaches in other states greatly helps to enrich and define the options that are at least plausible for Montana to consider. This study is not a substitute for studies of fair market value specific to Montana, but rather is intended to put such studies in a larger perspective.

This study is organized into three sections. After this introductory section, we provide a summary of the major policy issues and options for Montana based on our survey of practices in other states. The third section provides a much more detailed discussion of our survey findings for each of the major use categories. This third section also provides a more indepth discussion of the legal context and land marketing issue.

The surveys were all personally conducted by Jim Boyer.

2. Approach

Telephone interviews were conducted with land managers in all 22 states which are members of the Western States Land Commissioners Association (WSLCA). These surveys were implemented in June-August 1992. Prior to the formal start of the phone surveys, a letter of introduction was sent to WSLCA members by Jeff Hagener of Montana Department of State Lands (Appendix A). The surveys were intensive and often lasted up to an hour or more. We appreciated very much the cooperation of the commissioners and staff of the other WSLCA member states. The land managers were asked questions about trust mandates, agency administration and funding, the characteristics and uses of state land, lease fees, and recreational issues. Appendix B provides a list of individuals contacted.

B. POLICY ISSUES FOR MONTANA

Based on the experience in other western states, it is possible that Montana could substantially increase its earnings from surface uses of state lands. This would, of course, require changes in management rules and policies. The state would need to increase lease fees for existing uses of state lands, and initiate policies which would encourage new and higher value uses where such land uses are appropriate. Such changes would, of course, in many cases negatively impact current users and leaseholders on state lands. To institute some types of change, the state would also need to increase staffing to manage more intense uses of trust lands and carry out enforcement functions. Conversations with land managers from other states, point to the following issues as warranting consideration by the Montana State Legislature, the State Land Board, Department of State Lands administrative personnel, and the users of state lands. These key policy issues are briefly summarized in this section. A more detailed discussion is provided in Section C.

Trust Mandate

1. Montana interprets its trust land mandate as requiring management of state lands for the maximization of revenues for the benefit of the common school trust. Montana's interpretation of its trust mandate is similar to that of most other western states.

A case can be made that Montana's land management policies do not always maximize trust revenues. Comparisons of Montana grazing fees with rates charged in neighboring states suggests that Montana could be receiving more income from its grazing leases. Definitive findings on this issue of course rest on a specific examination of market prices for leasing in Montana. Leasing land for agriculture in growing urban areas probably does not generate the greatest possible revenue from these lands. The state receives an average of $250 a year for cabin site leases, many of which would probably lease for much more in the private market.

2. The federal enabling legislation, the Montana Constitution, and attorney general opinions require that the state receive full market value for uses of state lands. Below market value leases of state lands, which benefitted private individuals at the expense of trust beneficiaries, were found to be unconstitutional by the Nebraska and Oklahoma supreme courts.

Sales, Exchanges, and Land Purchases

1. With 5.2 million surface acres, Montana retains more of its original trust lands than do most other western states. Many western states sold their highest value lands early in statehood. Montana is in the advantageous position of having most of its original land resource in tact.

2. Montana's policy of selling unprofitable and difficult to manage state lands is consistent with the policies of most other states. In FY 1991-1992, Montana sold 16 acres of state land. A few states are actively attempting to sell low profit lands and use revenues to purchase higher value lands.

3. Most states feel that larger consolidated land holdings are easier to manage and more profitable to lease. States agree that land exchanges with federal government agencies are desirable, but few states have been able to consolidate holdings through land such trades. Most successful state-federal land exchanges involve forest lands.

In the 1970s and 1980s, Oregon and the U.S. Bureau of Land Management successfully exchanged over 1 million acres of land. The purpose of the exchange was to consolidate state and federal holdings. Land exchanges were successful because of intervention by the U.S. Secretary of the Interior.

Other attempts at grand scale state-federal exchanges have failed. Utah's "Project Bold" ran into difficulty over exchanging state and federal mineral rights and also experienced widespread opposition from surface users. Montana regularly completes small land exchanges with the U.S. Forest Service, corporate land owners, and individual ranchers.

4. Washington, Colorado, Texas, and California have created land bank systems which allow all or a portion of revenues from the sale of state lands to be used to purchase replacement lands for the school trust. Trust income from newly purchased lands has been much greater than would have been received if land sale revenues had been invested in the permanent trust fund. In Montana and most other western states, revenues from the sale of state trust land are immediately invested in the permanent school trust fund. There is no system for acquiring replacement lands for the trust.

Grazing and Cropland Leases

1. Montana's minimum grazing fee and preference right systems for agricultural leases are similar to those which were found to be unconstitutional in Nebraska and Oklahoma. It is possible that Montana would lose a law suit challenging its leasing system for agricultural leases. Nebraska and Oklahoma were forced by court orders to revise state land administrative policies which resulted in below market value subsidies to farmers and ranchers at the expense of the trust beneficiaries. In compliance with court rulings, Nebraska and Oklahoma reset minimum grazing fees at full market value, instituted policies to encourage open competitive bidding on state leases, and abandoned their preference right systems.

2. Montana's $4.17 minimum grazing fee is below fees set in most states in the northern regions of the west. States with much higher AUM rates than Montana continue to lease all of their state lands. Neighboring North and South Dakota, where average state AUM rates are above $7.00, report above 99 percent lands being leased.

3. Nebraska and Oklahoma contend that there is no difference between the value of an agricultural lease for state lands and private lands. State lease fees approximate lease rates for comparable private land. These states feel leaseholders are provided with the same rights

as would they would receive in lease for private lands. Conversely, Utah contends that a state lease is only worth about half of the value of a private lease.

Only one state has attempted to systematically quantify the differences between the values of leases for state and private lands. North Dakota has developed a system for adjusting individual lease rates for state land based on the presence or absence of fencing, water, weeds and other factors affecting the land's productivity and management costs.

4. Where states have been able to encourage competitive bidding for grazing and cropland leases, they tend to achieve considerably higher rents from the leases. The states which have been most successful at encouraging competitive bidding use oral auctions rather than sealed bidding. These state also have vigorously promoted public awareness of auctions through published notices, mailings, postings, and other advertising. Nebraska, Oklahoma, North Dakota, and South Dakota report 20 percent of leases being contested compared to only about 5 percent in Montana. States with preference right systems acknowledge that preference rights discourage competitive bidding on state leases.

5. Texas has used income from the sale of numerous individual grazing tracts to purchase large consolidated ranch units. Competitive bidding is most likely to occur on large contiguous state parcels. Because of the competitive bidding, Texas is receiving nearly double its minimum AUM rate for its larger ranch units.

6. Even where states have promoted competitive bidding, most grazing and agricultural leases are renewed without competition. For this reason it is important that states establish minimum rents which approximate the full market values of the state land.

7. States which base grazing fees on market studies of lease rates for comparable private lands tend to have higher lease fees than states using formula systems. Where states use formula systems, grazing fees tend to be set for worst case grazing conditions. Most states with formula systems acknowledge that formulas produce minimum grazing fees which are below market value.

8. Where states use market comparisons to set lease rates, they are able have vary minimum fees by geographic subarea to account for differences in costs of ranching and market conditions. Ranchers pay $10 per AUM in lush eastern Oklahoma and $5.00 per AUM in the state's barren panhandle.

Where a single minimum lease rate is applied statewide, it must by necessity be set for the worst case ranching conditions. For example, Utah does have grazing lands which are only worth $2.32 an AUM. However, by setting a low minimum AUM rate, Utah also leases most of its higher value land at this minimum rate. Montana's minimum AUM rate of $4.17 serves as the lease rate for 95 percent of the state's grazing leases.

9. Several states have recently instituted major increases in grazing lease fees. These states have developed schedules which have phased in the increases over a period of years.

10. Most states which allow subleasing of state lands receive a large share (e.g. 50 percent) of the sandwich profits resulting from the subleases. In some states, subleasing requires renegotiation of a lease agreement, to insure that the state is properly compensated for the value of the land. Montana does not share in leaseholder profits from subleases. A high incidence of subleasing is an indication that AUM rates are too low.

11. Most states receive cash rents for leases of dry cropland. Lease fees are based on market studies of lease rates for comparable private lands or a percentage (25% is common) of the estimated value of crop production from the lease. Estimates of production are also based on studies of comparable private lands. Cash rents are paid to the state irrespective of the actual value of crop production from the lease.

12. Montana receives 25 percent of the value of crop production for its dry cropland leases. Many private leases in Montana provide the land owner with a 33 percent share of the value of production.

13. Washington and Montana rely on the honor system to receive their fair shares of the agricultural sales from their crop share leases. Both states lack the staff necessary to monitor whether or not they are receiving their fair share of crop production. Montana should study average annual production levels on state lands and compare them with production from equivalent private lands.

Commercial Leasing

1. Commercial leasing of state lands has become a major source of revenue for some western states. In FY 1991-1992, Arizona earned $8 million, Washington $2.3 million, New Mexico $900,000 million, Texas $570,000, Colorado $480,000, and Oklahoma $350,000.

2. Arizona, New Mexico, and Washington held on to trust lands in their urbanizing areas. As urban expansion placed school trust lands in the path of development, land use conflicts made it increasingly difficult to continue agricultural uses. Furthermore, state lands became suitable for commercial and high value residential land uses, and agricultural uses ceased to be the highest and best use of the lands. By leasing these lands to commercial developers, or selling lands for high value residential uses, states were able to earn considerably more income for the school trust.

Because Montana has retained ownership of most of its trust lands, it owns several parcels within the state's growing urban areas and high value recreation areas. In some instances this land has already become valuable for non-agricultural land uses.

3. States with well developed commercial leasing programs generally issue long-term leases with periodic rent review. Rent review provisions allow for rent adjustments to account for

changes in value of the state land over time. It is common for states to enter into 20 to 40 year lease agreements, and to require rent review at least every 5 years. New Mexico and Idaho view their restrictions to 5 and 10 year leases as a major obstacle to commercial leasing. Without long-term leases, it is difficult for developers to obtain financing for commercial projects. Montana has the flexibility to enter into long-term lease agreements.

4. States with well developed commercial leasing programs tend to base commercial rents on 8 to 10 percent of the appraised value of the land as commercial property. In addition, states will often receive a small percentage (1 to 2 1/2%) of the lessee's gross sales. Montana and a few other states are receiving about 5 percent of the appraised land value for commercial leases.

5. States practices vary on requiring open bidding for the awarding of commercial leases. In most instances, states react to developer-initiated proposals. The commercial leasing process involves negotiations between state and the developer making the proposal. States require that all long-term commercial lease agreements be formally approved by the state land board. Where states seek to instigate competition for commercial development of a state parcel, they may use an RFP process to prompt proposals.

6. States with land banking systems use income from sales of state trust lands to purchase real estate with commercial development potential in expanding urban areas. Washington, Texas, and Colorado have purchased high value urban real estate which has subsequently been leased for commercial development. One Washington holding generates $1.7 million a year for the school trust. Rates of returns on the states' commercial real estate purchases have been much greater than interest rates on trust investments. Montana is not legally restrained from purchasing new lands on behalf of the trust, but has no income source to make such purchases.

7. States with advanced commercial leasing programs emphasize the need for overall development strategies for achieving the highest and best uses of commercial parcels. These states will not approve land uses which are incompatible with overall plans. Initial commercial land uses are likely to influence the characteristics of other development on a the state parcel.

8. States with advanced commercial leasing programs have staff devoted exclusively to management of commercial properties.

9. States with advanced commercial leasing programs attempt to develop a few large commercial projects in lieu of numerous small projects. The states cite high administrative costs for individual leases as a major disadvantage of managing numerous small parcels. States prefer to issue a master lease to a single business person, who is responsible for managing development of the entire state tract.

10. Most states prefer to sell residential property rather than lease it. States have difficulty in developing and managing long-term lease agreements with numerous residential property owners. Arizona will enter into commercial lease agreements for apartment complexes.

11. States emphasize the need to work effectively with local governments. Compatible zoning and the availability of adequate roads and government services are essential for successful development of commercial projects. Washington cites instances where local governments and citizens have viewed state lands as permanent open space and have resisted state efforts to convert agricultural lands to higher uses.

Recreation on State Lands

1. Recreation access to state lands is a controversial issue in many western states. Montana's permit system is unique, and other states are watching to see how well it works.

2. In most states, the public has a right to access state lands for recreation, and leaseholders may not post land to restrict permitted public uses. In some states, the right of access is limited to hunting only or hunting and fishing only (this is the case in Montana). In some states public has the right to use state land for diverse recreational purposes. Most states do not impose a fee system to compensate the trust for personal recreational uses of trust lands.

3. A few states grant agricultural lessees the authority to control public access to state leases and to charge the public for recreational access. Most of these states have systems whereby the school trust receives a share of leaseholder income from public access charges. Texas awards separate grazing and hunting leases on trust lands. Colorado is contemplating a similar system.

4. A few states also allow for exclusive leasing of state lands for hunting. Texas, Colorado, and Oklahoma lease lands to big game, duck, and game bird hunters. Texas earns $28,000 on a single 5,500 acre hunting lease. Colorado's fee is $2.00 an acre. Where lands are leased by outfitters, the states also receive a share of the outfitters' gross incomes.

5. During 1992, Montana is instituting a system for charging outfitters for the right to use state lands. Outfitter permit fees are being negotiated. Montana strives to achieve 5 percent of outfitter revenues related to guiding on state lands. Montana's share of gross revenues is comparable to what Alaska's charges. Texas and Colorado receive a much higher share of outfitter gross revenues. Wyoming's charge to outfitters using state lands is based an a cash rent of $0.15 an acre. Alaska, Minnesota, and Idaho also charge outfitters for locating base camps on state lands. Outfitters may not restrict the general public's use of state lands except where they have paid for exclusive hunting rights.

Cabin Leases

1. Idaho is experiencing major a increase in its income from cabin leases due to dramatic growth in the value of its lake- front property. Idaho earns $1 million a year from 600 cabin site leases in the northern part of the state. Montana has numerous lake front cabin site leases in western Montana which are likely to become increasingly valuable. As land values for western Montana recreation properties increase, the state should receive significantly more income from its cabin site leases.

2. Montana's formula for determining a lease rate for cabin leases is 3 1/2 percent of the land's appraised value. Minnesota receives 5 percent of the land's appraised value. Idaho receives 2 1/2 percent of the appraised value.

3. Montana owns additional lands suitable for recreational home development. The state maintains a moratorium on developing new cabin leases due lack of adequate staffing. Minnesota recommends that the states strive for administrative efficiency when developing new cabin leases by clustering new cabin sites. States which do significant commercial leasing recommend against incremental development of state parcels. States should develop plans for the highest and best uses of the overall tract and only approve uses which are consistent with those plans.

4. States tend to treat commercial recreation uses, such as golf courses, ski resorts, marinas, and lodges, like other commercial recreation uses, and lease fees are based on a percent of the market value of the land and/or a percent of gross earnings.

5. Montana and most other western states issue permits or licenses and receive fees for special group uses of state lands. Examples of group uses include weddings, horseback riding, snowmobiling, and motocross activities. Montana is unusual in that it also licenses individual uses of state lands such as bird watching, berry picking, and photography. The Montana licenses authorize use of lands which are leased or licensed for other uses. Montanans have a general right of access to unleased and unlicensed state lands.

Miscellaneous Land Management Issues

1. Several states receive substantial income from the leasing or sale of state lands for communication facilities and towers.

2. Some states have started to issue long-term leases (30 years) to utilities instead of permanent easements for transmission and pipeline line right of ways. This affords the state the right to renegotiate the terms of the agreement at the end of the lease period. Montana issues permanent easements.

3. Montana and a few other states collect all of the damage payments from oil and gas developers when petroleum exploration or development takes place on state lands. Montana compensates lease holders for damage to crops or for restrictions on their grazing uses of

leased lands. Some states allow lessees to keep damage payments or share payments with their lessees.

4. Absence of staff and funds are major obstacles to Montana pursuing favorable income earning opportunities from surface uses of state lands. In Montana and many other states, the land management agency is funded primarily through legislative appropriations. In a few states, the state land management agencies is-self funded. In these states, land management functions are financed through a share of the revenues generated by the state lands. Self-funded agencies tend to be aggressive in pursuing income maximization from state lands.

C. INTERVIEW SUMMARY

1.Constitutional Mandate and Legal Issues

Interpretations of Land Management Mandate

State interpretations of congressional enabling legislation and constitutional mandates affect the purposes for which state trust lands are managed and how earnestly states pursue maximization of trust income from their lands. Montana interprets its trust land mandate as requiring the management of state lands for the maximization of revenues for the benefit of the school trust, designated state universities, colleges, and institutions, and the state building fund.

Montana's interpretation of its state trust lands mandate, "to maximize revenues to trust beneficiaries," is consistent with the majority of other western states. However, a few western states, notably Washington, Oregon, and Minnesota have expanded their interpretation of trust land beneficiaries to include their general citizenries and benefits to include non-monetary values, and in particular environmental and recreational benefits. Washington, Oregon, and Minnesota devote significant amounts of state lands to park lands, conservation areas, and preserves.

Of greatest interest is Washington, which shares the federal enabling legislation with Montana. Under Montana's interpretation of its state land mandate, the school trust would need to receive "full market compensation," for non-revenue generating uses of trust lands, even when uses are for public purposes. Washington contends that slight differences in the state specific enabling directives allow it the discretion manage state land for furtherance of environmental values, even when such management may reduce the income of the school trust (Roy Henderson, 1992). Even so, there are instances where the Washington legislature has appropriated funds to compensate the trust for designation of state trust lands to non-revenue generating uses.

The Oregon constitution provides that state trust land be administered for the "greatest benefit of the people of Oregon and the school common trust." The language is very similar to language in the Montana constitution**. However, the Oregon attorney general opinion contends that protection of environmental resources and recreational and other benefits accruing to the general public are legitimate uses of school trust lands (Burt Lewis, 1992).

The most extreme case is Minnesota, where only 20 percent of trust lands generate revenue for the school trust. The Minnesota legislature has passed legislation which authorizes environmental protection and the establishment of recreational areas as legitimate uses of school trust land (Jim Lawler, 1992).

A practical consideration is that funding of education in Washington, Oregon, and Minnesota is much less dependant on revenues from state lands than is the case in Montana.

Full Market Value and Highest and Best Use

Both the Congressional Enabling Legislation and the Montana Constitution assert that the state must receive full market value for the sale or disposition of any interest in state trust land (including a lease or a leasehold interest). This type of stipulation in enabling acts and state constitutions is common among western states. Some state constitutions, for example California's, also contain general gift clauses which restrict the state from making a gift (i.e. obtaining less than full market value) of any state owned resource to any private interest (Jane Sekelsky, California, 1992).

While enabling acts and constitutions mandate that states receive full market value for disposition of interests in state lands, states acknowledge that they are receiving less than market value for certain uses. Most western states allow for public hunting and fishing access to state trust lands without requiring that the trust be compensated for these private uses of the trust property. Some states also allow for public uses of trust lands (state and local governments and schools) without requiring full market reimbursement. Several states also acknowledge that their fees for grazing and cropland leases are set lower than full market value.

A few state officials cited court decisions which forced them to change statutes and policies which allowed them to lease state land for less than full market value. In the 1981 Oklahoma case, "OEA (Oklahoma Education Association) v. Nye," the Oklahoma Supreme Court Ruled that the grazing rental lease limitations created by the legislature and the automatic renewal of fixed rate rentals were unconstitutional. The court found the below market rental fees charged for agricultural leases amounted to a subsidy to farmers at the expense of the school children and public buildings of Oklahoma.

> "...maximization of revenues to the trust was the state's first obligation...The primary duties of the Oklahoma Commissioner's Land Office are to safeguard assets and maximize revenue for the benefit of trust beneficiaries, and no disposition of trust lands or monies can be made for the benefit of any private or public concern, except for the trust beneficiaries: the schools and public buildings of Oklahoma."

As a result of the "Nye" case, Oklahoma discontinued leaseholder "preference rights" to renew the surface leases and instituted public auctioning of its grazing leases. In instances where no competitive bids were received, Oklahoma sets its minimum fees at as close as possible to fair market value (Douglas Morgan, 1988) (John Taylor, Oklahoma, 1992).

Nebraska's 1951 case, "Ebke v. the Board of Educational Lands and Funds is very much like Oklahoma's "Nye" case. In the "Ebke" opinion, the Nebraska Supreme Court found that state actions in administering the trust must be in the sole interest of the beneficiaries (school children of Nebraska). State actions which substantially benefit a special class of persons at the expense of the trust is a breach of the trust. The court found unconstitutional legislative actions which fixed lease rates for state agricultural lands without regard to fair market value. The court reiterated the state's responsibility to obtain maximum return to the trust estate from trust properties, subject to the taking of necessary precautions for the preservation of trust lands (Nebraska Reports, 1951).

In adherence to the "Ebke" ruling, the state of Nebraska abolished preference rights for agricultural lease holders, set minimum grazing fees at full market values, and instituted competitive bidding for its leases.

The 1966 U.S. Supreme Court case, Lassen v. Arizona, was cited by several states as having an important impact on trust land administration. In this case, the Arizona Highway Department attempted to condemn trust land without paying compensation. The Highway Department contended that the construction of the highway would enhance the remainder properties in an amount at least equal to the value to the trust land taken. The Supreme Court ruled that the highway department must compensate the trust in money for the full appraised value of any material sites or rights of way it obtains over trust lands. The "Lassen" case has been used as a rationale for requiring full market value compensation from state, local government, and school uses of trust land. In addition, "Lassen" is used as a rationale for requiring the public to pay for recreational uses of state trust lands.

Although no there is no parallel case law in Montana, recent Montana Attorney General opinions parallel the rulings of the Oklahoma and Nebraska supreme courts and the U.S. Supreme Court in the Lassen Case. The following are excerpts are from a 1976 opinion issued by then Montana Attorney General Robert Woodall to Leo Berry Jr., then Acting Commissioner of the Montana Department of State Lands. The opinion addressed whether there must be compensation for school trust lands which are designated as natural areas under the Montana Natural Areas Act of 1974.

> "The Enabling Act of February 22, 1889, 25 Stat. 676, which admitted Montana into the Union along with North Dakota, South Dakota and Wyoming, granted sections 16 and 36 in every township "for the support of common schools" and prohibited the disposition of such lands "unless the full market value of the estate or interest disposed... has been paid."

> "Article X. Section 3 of the 1972 Montana Constitution. Public school fund inviolate, provides that the public school fund shall forever remain inviolate, guaranteed by the state against loss or diversion."

> "Article X. Section 11 of the 1972 Montana Constitution. Public land trust, disposition. (1) All land of the state that have been or may be granted by congress, or acquired by gift or grant or devise from any person or corporation, shall be public lands of the state. They shall be held in trust for the people, to be disposed of hereafter as provided, for the respective purposes of which they have been granted, donated or devised."

"While the Enabling Act does not say in so many words that the state is under duty to sell or lease school trust lands, it is elementary that this trust be administered so as to secure the largest measure of legitimate advantage to the beneficiary... As a practical matter this means the state must do something to generate and sustain income from school trust lands whenever possible... The state's discretion is not whether but how to seek gain from school lands for best advantage to the trust" (Robert Woodall, Montana Attorney General, 1976).

There has been at least one other Montana Attorney General opinion pertaining to minimum lease fees for non-contested grazing leases issued in recent years. The essence of that opinion is that the duty of the state lands commissioner is to maximize income for the school trust.

c. Environmental Laws

Several western states conduct environmental reviews of land management proposals which could have significant environmental impacts. All states are required to consider impacts to endangered species and historic resources. Montana and a few other states have Environmental Policy Acts which require variable levels of environmental review and analysis depending on the potential impacts of a land use proposal. The California Legislature exempted sales of state land from the requirements of its Environmental Quality Act. One state refuses to lease land to local governmets for landfills because of the potential for long-term liability for environmental damage.

2. Sales and Exchanges and Acquisitions of State Lands

Congressional enabling acts and state constitutions require that states receive full market value for sales of state lands, and land of equivalent or greater value when trust land is exchanged.

Retention of State Lands

Montana has retained a greater share of original state lands than have most other western states. Montana continues to hold approximately 88 percent of its trust land. Exclusive of Alaska and Texas which are special cases, western states retain about 40 percent of the original lands granted to them at statehood. Several states acknowledge that early land transfers have cost them their most valuable lands, and the transactions have worked to the long-term detriment of their school trusts.

Most of the sales and exchanges of state trust lands occurred during the early years of statehood. California, Nevada, and Oregon, and the midwestern and southern states sold and traded most of their state lands to prompt settlement and agricultural development. A few states, notably Arkansas and Louisiana, conveyed trust lands to individual school districts. Most of the school districts subsequently sold off their trust lands to private owners.

In general, Rocky Mountain states have retained greater shares of their state lands than have other western states. Table 1 provides for comparisons of original state land grants and current state holdings.

Current State Practices Regarding Sales

Again, most of the land sales transacted by western states occurred in the early years of statehood. In the 1990s, Montana and most other western states have policies of retaining ownership of most of their remaining trust lands.

Most states continue to sell off modest amounts of land each year. These transactions are generally limited to small-isolated parcels, which are difficult and unprofitable to manage. An example of this type of property is a partial section of grazing land, surrounded by private or federal ownership, with no public road access, and little likelihood of attracting competitive bidding at lease renewal. A recent study conducted by the California found its administration of small agricultural leases had a negative cash flow (Don Reese, California, 1992).

Most states also have policies of selling property which is being converted to residential land uses, and cite the complexity of managing residential property and the land ownership requirements of private mortgage companies as reasons for electing to sell rather than lease such properties. Several states have also chosen to sell off cabin leases, citing the lack of profitability, high administrative costs, and difficulty of managing such properties as their reason for doing so. States require "Land Board" approval of all land sales.
Montana sells off a few tracts of state land each year. These are generally small, isolated, unproductive, or difficult to manage tracts (Jeff Hagener, 1992). Montana and the other western states require that the land be appraised before it is sold and must receive full market value for property. Montana generally requires the purchaser to pay for the appraisal. Some states also require reimbursement for costs incurred in carrying out land transactions though substantial application fees. California bills applicants for all direct costs incurred in making the transaction (Don Reese, California, 1992).

In many of the western states, revenues from land sales must immediately be placed in the permanent school trust fund. Most states feel that putting all revenues from land sales into the permanent trust fund works to the long-term detriment of the trust (Curt Johnson, South

Table 1

State Surface Lands (in millions of acres)

	Original Grant Acres	Current Acres Managed
Alaska	105.0	85.0 /1
Arizona	10.8	9.4
Arkansas	1.3	0.0
California	9.0	0.6 /1
Colorado	4.8	3.0
Hawaii	1.0	0.4
Idaho	3.6	2.5
Louisiana	11.0	1.5
Minnesota	16.4	2.5
Montana	**5.9**	**5.2**
Nebraska	2.8	1.5
Nevada	2.7	0.0 /2
New Mexico	13.4	9.4
North Dakota	3.2	0.7
Oklahoma	3.1	0.8
Oregon	4.3	0.8
South Dakota	3.5	0.8
Texas	216.5	0.9
Utah	7.0	3.7
Washington	3.1	2.9
Wisconsin	10.0	0.1
Wyoming	4.2	3.6

1/ Alaska will select an additional 20 million acres from existing federal lands. California also has additional lands to select from federal holdings.

2/ Nevada retains about 3,000 acres of school trust land.

Western States Land Commissioners, Western States Land Commissioners, Association Directory, 1991.

Dakota, 1992). States where this restriction is invoked tend to be passive about selling state lands. These states feel that maintaining the state's land base and receiving annual revenues from leases will produce a greater long-term return than would selling off the land and earning interest from the permanent trust's investments.

In Montana revenues from the sale of state lands must revert immediately into the permanent school trust, and cannot be reinvested in other properties. Montana statutes do not prohibit the state from purchasing additional lands from the trusts, but about the only way the state can fund a land purchase is through a legislative appropriation. Obtaining a legislative appropriation is time consuming and cumbersome, a process not well suited to the state's participation in a competitive real estate market.

Where states have been permitted to reinvest in other higher value lands, they feel they have achieved a much greater rate of return for the trust than if monies from land sales had simply been left to earn interest in the permanent fund. Washington and Texas are the states which most actively pursue the sale of low profit state lands. The objective in both states is to sell property with low or declining revenue production and acquire property which will produce greater long-term income for the trust (Karl Lindberg, Texas, 1992) (Rich Scribner, Washington, 1992).

To facilitate the purchase of new, more profitable state lands, the legislatures of Washington and Texas have created land banking mechanisms which allow revenues from sales of trust lands be placed in escrow accounts which can then be used to purchase new land for the trust. If land sale revenues are not used to purchase replacement lands within a specified time (for example 2 years), they revert to the permanent trust fund. Texas claims to be achieving an 18 percent per annum return on its re-investments in real estate (Karl Lindberg, Texas, 1992) . Washington was not willing to estimate the state's rate of return, but is confident that achieving a much higher rate of return as a result of its newly purchased lands (Rich Scribner, Washington, 1992).

The state of Texas is willing to sell its small acreage low- carrying-capacity grazing lands. With revenues from the land sales Texas has acquired large consolidated ranching properties, which it is able to lease as self-standing ranches. When Texas's larger grazing leases have gone to bid, intense competition has caused nearly double the rates achieved for leasing many small diffuse parcels (Ned Polk, Texas, 1992).

Texas also uses revenues from the sale of state lands to purchase raw property in the Dallas, Houston, Austin, San Antonio, and El Paso areas. Texas has attempted to acquire lands in the path of urban development and then lease these properties to commercial developers. In these instances, the state has looked to acquire land which has a likelihood of intensive development within a 10-year time horizon. Texas feels its commercial leasing has produced revenues many times greater than would have been achieved had the state's grazing land been retained or if revenues from the land sales had been placed in the permanent trust (Karl Lindberg, Texas, 1992).

Washington's land sale program is passive. The state does little to initiate interest in the sale of state tracts, but waits to be contacted by an interested party. When the state is approached, it may or may not choose to sell the parcel, depending on what it perceives as being in the best interest of the trust. The state considers the land's current and future revenue generation potential in making this determination. If the state determines a land sale is in the best interest of the trust, it will first offer the land for sale at the "full market" price to the trust beneficiary (e.g. local school district or University of Washington). If the beneficiary declines to purchase the land, the state must hold a public auction, where the original proposer and others may bid competitively for the land.

Washington's land sales are occurring mainly in the urbanizing areas of the western portion of the state. The state is choosing to sell lands where subdivisions or other urban land uses have encroached on state lands devoted to agriculture or timber production. In such areas, land use conflicts make it increasingly difficult carry out agriculture or logging. The state also recognizes that with urbanization, agriculture and forest uses cease to be the "highest and best" use of these properties. Washington feels it is compelled by its trust mandate to convert the land to a "higher use" (to maximize income for the trust's beneficiaries).

Like Texas, Washington is using a portion of its land sale revenues to purchase urban real estate with commercial development potential. Unlike Texas, which acquires only land, Washington can acquire both land and improvements which will produce long-term revenues for the school trust.

The state of Washington has been criticized for competing with private land developers and for speculating on real estate. The state's counter argument is that its actions are consistent with its fiduciary responsibility to maximize the income to the trust. One property which was purchased on behalf of the trust generated $1.8 million in revenue in 1992 (Rich Scribner, Washington, 1992).

Another difficulty incurred by Washington has been a local government and public perception that state lands are to be held in perpetuity as open space or other public uses. Local governments and citizens have occasionally been antagonistic to state proposals to covert state lands in urbanizing areas to "higher uses." In some cases, Washington local governments have zoned state land as open space. The State of Washington's approach to this problem has been to offer to sell the land to the local government (at full market value), with the condition that if local government does not purchase the land within two years, a zoning change can be approved which would allow the lands to be converted to a higher use.

Colorado and California have recently established land banking programs similar to those of Texas and Washington. Both states intend to use revenues from the sale of less profitable property to purchases urban lands which are likely to produce higher long-term returns for the trust.

Current Practices Regarding Exchanges of State Lands

Most exchanges involving state lands are made with federal government agencies. States also carry out exchanges with Indian reservations, major land holding corporations (often forest products companies), and individual land owners (usually farmers or ranchers). The objective of most land exchanges between state and federal agencies is the consolidation of holdings. Western states feel they can achieve better land management, lower administrative costs, and greater revenue generation from large contiguous tracts of land. Exchanges with Indian reservations and private land holders generally result from a desire to acquire (eliminate) state inholdings.

In recent decades the most significant exchange of state land involved the State of Oregon and the BLM. From 1969 to 1985, Oregon and the BLM traded over 1 million acres of land.

The Oregon-BLM exchanges took place as a result of a 1969 order by the Oregon Land Board. Initially, some Oregon BLM administrators resisted state land exchange proposals. This resistance ended when then U.S. Secretary of the Interior, James Watt issued a directive ordering BLM cooperation. Thereafter, the successful completion of land exchanges became a consideration in the performance appraisal of BLM's district administrators and the exchanges were completed.

Oregon's objective in the BLM exchanges was to consolidate state land holdings and also to acquire land which it could invest in to improve agricultural productivity, and thus increase income to the school trust. Exchanges were made on a parcel for parcel basis.

The Oregon-BLM land exchanges did not generate significant public opposition, even though Oregon's AUM lease rates were slightly higher than BLM rates. Oregon cites the reputation of state government for responsiveness to leaseholders, the greater flexibility Oregon affords its lessees, and the state's willingness to partake in joint ventures to improve land productivity as reasons for absence of lessee resistance to the exchange process. Another contributing factor was that Oregon honored the terms of existing BLM leases. This meant that ranchers who borrowed money on their 20 year federal lease received a state lease for the remainder of the federal lease period.

An equally ambitious land exchange proposal was Utah's "Project Bold." Project Bold attempted to achieve over a million acres in exchanges of state and BLM land for the purpose of consolidating holdings. Utah's plan for major systematic exchanges with the federal government was never implemented. One reason cited for the project's failure was it was "too big," and engendered opposition from many public agencies and special interest groups (Gary Bagely, Utah, 1992). Another complicating problem was the complexity of trying to exchange mineral rights. The exchanging of mineral rights was not a major issue in Oregon because Oregon is not a mineral rich state. In Utah, the state and BLM were never able to negotiate a mutually acceptable exchange of mineral bearing properties.

In general, Montana and other western states, have found it easier to make land exchanges with the U.S. Forest Service than with other federal agencies. Several states commented about the resistance to exchanges they encountered from BLM administrators. One state felt its state inholdings within national parks were being held hostage by the U.S. Park Service. A complicating factor in exchanges with the National Parks is that the state must be compensated from the land pool of another federal state agency; typically the BLM. BLM managers are resistent to exchanges which do not directly compensate the BLM land pool.

In South Dakota, the state is exploring the possibility of exchanging its inholdings on Indian reservations for productive land elsewhere in the state. In this scheme, the reservation would acquire desirable lands (identified by the state), and then would trade the acquired properties for state lands within the reservation (Curt Johnson, South Dakota, 1992). Revenues from the sale of South Dakota trust lands are immediately reverted to the state's Permanent Trust Fund. By working through reservations, South Dakota hopes to use the exchange process to acquire properties which will increase trust income.

3. Grazing Leases

The most prevalent use of state lands in the western U.S. is for grazing. This is particularly true in Montana. Of Montana's 5.2 million acres of state land, 4.3 million acres are leased for grazing. The state administers over 8,000 grazing leases. The largest 20 lease holders control about 10 percent of the state's grazing land. In FY 1992, the state collected $4.3 million in grazing fees. Revenues from grazing leases averaged $1.01 an acre.

Management Objectives

Grazing is the only foreseeable use for much of the west's school trust land. The common objective of state grazing programs is to maximize the income to the school trust and to protect long-term productivity of the land resource.

Some states feel that revenue maximization and land stewardship objectives are in conflict. States agree that maximization of revenues is best achieved when there is open competition for a grazing lease. The results of impartial and contentious bidding will naturally approximate full market value.

The conflict arises because leaseholders are most likely to practice responsible land stewardship when they have a sense of long-term ownership. This is accomplished through leasing systems which virtually guarantee renewal to the prior lease holder. Without strong assurance of lease renewal, some ranchers would deliberately use inappropriate range management practices during the final years of a lease term, in hopes of discouraging competition and/or devaluing the bidding for the state lease.

Leasing Systems

Western state grazing leases (or permits) are awarded based on an assessment of the carrying capacity of land. In theory, leases enumerate the number of cattle or sheep which can be responsibly grazed on state land. Most states conduct periodic evaluations of state land range conditions in order to set land carrying capacities- usually every 5 to 10 years. Montana assesses land capacities of its parcels at least once every 10 years.

In most western states, lease fees are based on a rate per "Animal Unit Month," (AUM). In a few states -Nebraska, North Dakota, New Mexico and Louisiana- the lease fee is a cash rent per acre. Cash rent per acre can be converted to approximate AUM rates.

States generally set a base rate per AUM or per acre, which represents the minimum annual payment the state will accept for a lease. In the vast majority of cases, there is no competitive bidding for a state lease, and the base rate is used to calculate the rental fee.

Table 2 compares base rates for grazing leases among the western states. State minimum lease rates for grazing lands range from a low of $1.48 per AUM in Arizona to a high of $30.00 per AUM in Hawaii. At $4.17 per AUM, Montana is in the middle grouping of states. It is noteworthy that western states are able to lease all usable grazing lands, irrespective of their AUM rates. The states with the highest lease rates, Hawaii, Nebraska, North Dakota, South Dakota, Oklahoma, report leasing nearly all (over 99 percent) of lands suitable for grazing.

It is significant that ranch operation costs vary from state to state and site to site within states. Fencing, roads, access to water, proximity to markets, the presence of predators and other factors affect the attractiveness and/or affordability of grazing leases. Arizona and Utah cite water development costs, road access limitations and travel distances, livestock losses to predators and desert conditions, and slower cattle weight gain as reasons for setting low AUM rates.

Determination of Minimum Lease Rates

Montana's minimum AUM rate is set by formula, which is the average per pound market price for cattle from the previous year times 6. The Montana land board may increase the AUM rate if it feels the formula rate is too low.

Most other western states also use formula systems to set rates for grazing leases. State formulas generally account for market and forage conditions, and variations in costs of ranch operations. Southwestern desert states use derivations of the federal government's PRIA formula to determine lease rates. The PRIA formula produces very low AUM lease rates, which Arizona and Utah feel are justified by desert grazing conditions and the status of much of state land being in-bound within BLM parcels. California uses the PRIA method where state lands are in-bound within BLM holdings.

Table 2

State AUM Rates

	Base Rate for Cattle Grazing Leases
Alaska	$2.00 - $3.00
Arizona	$1.48
Arkansas	**
California	$1.92- $4.00 depending on land characteristics
Colorado	$4.70
Hawaii	$30.00
Idaho	$4.99
Louisiana	$5.00 - $10.00 estimated from per acre rents
Minnesota	$3.00 - $5.00
Montana	**$4.17**
Nebraska	$11.00 - $18.00 estimated from per acre rents
Nevada	Not available
New Mexico	$3.29 estimated from per acre rents
North Dakota	$7.50 estimated from per acre rents
Oklahoma	$6.50 - $11.25
Oregon	$2.50 - $3.50
South Dakota	$7.08
Texas	$4.17
Utah	$2.32
Washington	$6.20 for lease, 4.95 for permit
Wisconsin	no grazing leases
Wyoming	$2.50

Most western states share Montana's "cow-calf" definition of an Animal Unit. Idaho's definition of Animal Unit is a 500 pound calf.

South Dakota and Washington have the highest lease rates among states using formulas. Most states using formulas acknowledge that their methodologies produce lease rates which are below market value.

An increasing number of states are using comparable value studies to determine their base rates for grazing leases. North Dakota and Nebraska conduct elaborate annual studies of private lease rates by classes of grazing land and state sub-region. California studies lease rates charged by other major land owners, e.g. the Southern Pacific Railroad, in determining its AUM rates. Oklahoma conducts appraisals of individual parcels once every 5 years. Other states rely on state department of agriculture or USDA rent statistics or the personal knowledge of private market values.

States which use comparable value studies tend to set higher minimum lease rates than do states using formulas. Hawaii, Nebraska, North Dakota, Oklahoma, Louisiana, and California feel that by studying lease rates for comparable private lands, they are able to set AUM rates which closely approximate "full market value."

In Texas and Oregon, the minimum AUM rate is set by the state land board. Lease rates in Texas have not changed in 7 years. Oregon acknowledges that the setting of lease rates is highly political and that lease rates are strongly influenced by the state's cattlemen's association (Jon A. Studer and Sally K.Fairfax, Western States Trust and Sovereign Lands, Survey Results, 1991).

In Montana, and most other Rocky Mountain states, the base AUM rate is the same for all state owned grazing land. Oregon, Louisiana, California, North Dakota, and Nebraska are examples of states where minimum lease rates vary by region or by individual parcel characteristics. Oklahoma's base rate averages $5.83 in its arid panhandle area and $10.00 in more fertile eastern counties (John Taylor, Oklahoma, 1992). Oregon's base rate is $1.00 more per AUM in lush western Oregon than in desert-like eastern Oregon (Burt Lewis, 1992). A criticism of establishing a single statewide base rate is that it must necessarily be based on worst case ranching conditions. The single base rate system tends to undervalue lease rates for more profitable ranch lands.

Utah issues grazing permits instead of grazing leases. Utah uses a permit system in order to have a grazing system which is consistent with the BLM, which is the state's major landowner. Washington also uses permits for large blocks of state land.

In addition, Washington and Alaska selectively issue permits in lieu of leases in transitional areas. The reason for issuing permits is that they are easier to terminate when a "higher use" is proposed for the parcel. Many western states have cancellation clauses in their grazing leases which allow the state to cancel a lease to accommodate a more beneficial (profitable) use. In a few states, an agricultural lease can only be canceled for cause.

Annual Adjustments

Montana and the majority of other western states provide for annual adjustments of grazing fees to account for economic conditions for the cattle industry. Montana's grazing formula provides for systematic annual adjustments of grazing fees based on market conditions. The advantage of providing for annual adjustments of lease rates is that it allows the state to share in the good fortune and risk of the cattle ranching industry. In theory, annual adjustments in lease fees also account for inflation.

Some states, (North Dakota, Oklahoma, Texas) collect a fixed cash rent for the duration of a lease. These states tend to use shorter lease periods (5 years). The advantage of the fixed cash rent leases is the greater predictability of annual trust revenues, and greater immunity from downward economic cycles in the cattle industry.

Range Management Requirements

All states require lease holders to carry out responsible range management practices. States expect compliance with state or SCS range management guidelines, but, generally defer to the lessee to establish a specific range management plan. A few states specify the range management system to be used for state parcels. Hawaii requires lessees to use Savory grazing practices. Arizona prescribes holistic management. In Montana, the lessee and the Area Land Office work together on a prescription for use. In all western states, failure to adhere to appropriate management practices is grounds for cancellation of a lease or forfeiture of lease renewal rights.

Length of Grazing Leases

The length of grazing leases many be prescribed by statute, administrative rule, or administrative discretion. The interval of state grazing leases is generally 5 or 10 years, but can be as short as 1 to 3 years or as long as 20 years. Montana DSL has limited discretion to determine the length of the state leases. Most of Montana's leases are awarded for 10 years, but the state does issue 5 year leases if it is in the best interest of the trust.

States wishing to encourage competitive bidding for grazing leases tend to have shorter lease periods. A few states, Nebraska for example, establish short lease terms for highly productive grazing lands in hopes of maximizing competitive bidding and longer terms for less productive lands where competition is not expected.

States issuing longer-term leases feel they are encouraging better range management practices by lessees by establishing an ownership-type interest in the land. Another factor favoring long-term leases is that these leases are sometimes viewed as negotiable by banks and can be used as collateral on farm loans. A practical factor which encourages states to adopt longer-term leases is the cost of processing lease agreements. Especially for small parcel leases, state administrative costs involved in processing a lease may exceed annual revenues from the lease.

Competitive Bidding

Montana receives competitive bids on only about 8 percent of leases which come up for renewal. Most other the western states have similarly low rates of competition for their grazing leases. It is common for western states to renew 95 percent of leases without competition. Only Hawaii achieves competitive bidding on the majority of its grazing leases (Mason Young, Hawaii, 1992).

Montana receives an average of $4.24 per AUM for its state land grazing leases. This is less than 2 percent above the $4.17 minimum AUM rate set by Montana's grazing formula.

Several states, Wyoming, Arizona, Texas, Oregon, Minnesota, California, Alaska, Washington, Utah, have automatic renewal systems which can shut out competition for leases. In Arizona, Oregon, and Wyoming, the state's policy is not to encourage competition for leases, and about the only time there is competitive bidding is when the prior leaseholder chooses not to renew. Texas encourages bidding on larger ranch-size state parcels, but administratively renew small parcel leases and permits. Alaska and Utah will seek bids where competition is likely, otherwise they will negotiate a renewal agreement with the current leaseholder. If California feels it can obtain full market value for a lease through negotiation, it will do so, otherwise a lease will go to bid.

About half of western states have legislation or administrative rules mandating that a competitive bidding process be available for all lease renewals. Even in states where the public has a guaranteed right to compete for a lease, competitive bidding is the exception.

States with discretionary and mandatory bidding processes cite the non-accessibility of state parcels as a reason why leases do not receive competitive bids. Often state parcels are wholly surrounded by the lands of a single private land owner. Lands not accessible except by crossing private land are essentially controlled by the private land owner and rarely receive competitive bids. Montana has numerous situations where state parcels are wholly surrounded by singly owned private lands without public road access.

Similarly, state lands surrounded by federal parcels are essentially controlled by the federal lessee (because of the absence of fences). The BLM's leasing system virtually assures renewal by the current lessee, and thus discourages competing interest in the state parcel. State parcels being surrounded by federal leases is a common sitiuation in the southwestern desert states, but is not prevalent in Montana.

Even where state lands are accessible by public roads, most state leases are still not contested. States cite local social convention as a reason for lack of competition for state leases. In many western ranch communities, a state lease has been in the same family for generations and is viewed as private property of the leaseholder (Jamie Van Hatten, Wyoming, 1992). Neighboring ranchers will not contest a lease renewal, even when it is their own best interest to do so. Where a leaseholder chooses not to renew a lease, Montana often experiences vigorous bidding for the vacated lease (Jeff Hagener, Montana, 1992).

States with "preference right" systems acknowledge that preference rights also discourage competitive bidding for leases. A preference right allows the current leaseholder to retain a lease by matching the highest bid. When a preference right is exercised, it terminates the bidding process; and therefore, prevents bidding from reaching its full market value. More importantly, by biasing the bidding process in favor of the current leaseholder, preference right systems tend to dissuade other ranchers from contesting a lease renewal. In Montana, only 5 percent of lease renewals are challenged by a contesting bid and only 2 percent of leases change hands as a result of this bidding process (Montana Department of State Lands, Trust Land-Leases and Acreages by Agreement Type (computer printout), 1992).
There is also a question of how earnestly states invite competition for grazing leases. Notice procedures vary from state to state. At one extreme, Nebraska, North Dakota, South Dakota, Oklahoma, Alaska and Washington post notices in county courthouses and on the lease site, publish announcements in newspapers, and make direct mailings to prospective bidders . Nebraska also uses handbills and Alaska uses radio to advertise lease auctions. At the other extreme are states which simply notify the leaseholder that their lease renewal is due. Many states, including Montana, simply post lease renewal notices in courthouses. In Idaho and Utah, ranching interests have lobbied the state to not advertise grazing leases (Don Hobbs, Idaho, 1992) (Gary Bagely, Utah, 1992).

Nebraska, Oklahoma, North Dakota, and South Dakota are the states which do not have preference rights and diligently promote competition for state grazing land. Even in these states, there is competition for only 10 to 20 percent lease renewals. Nebraska and Oklahoma acknowledge continuing rancher resistance to competitive bidding, especially in rural communities. However, these states claim a gradual increase in the percentage of leases being competitively bid.

Bidding Processes

Again, the majority of grazing leases are awarded through administrative renewal, not through competitive bid. Where open competitive bidding occurs, states are likely to receive significantly more revenue for their grazing leases.

States which do not have a preference right system use oral auctions to award leases. An advantage of an oral auction is that there will always be a clear winner (no ties). The states which use the oral auction approach, feel it is the best bidding method for maximizing lease rates (Richard LeBlanc, Nebraska, 1992) (John Taylor, Oklahoma, 1992). States using oral auctions commonly receive bids of over $10.00 an AUM. The major disadvantage of oral bidding is the time and expense of advertising and administering auctions.

State with leaseholder preference rights generally use a sealed bid process to award leases. A sealed bid is an appropriate system in a preference right state because it requires the contesting party to submit one "best" bid. The current leaseholder then has the option of matching the bid or relinquishing the lease.

The criticism of the preference right sealed bid system is that it is less capable of maximizing revenues to the trust. The system doesn't afford the contesting party an opportunity to resubmit a higher bid if the initial bid is matched. More importantly, because the current leaseholder is likely to match a prudent (economically viable) contesting bid, it discourages competition for a lease. The frequency of competition for leases is greater in states with oral auctions (high bid wins), than in sealed bid preference right states. It is noteworthy that in both Nebraska's "Ebke" case and Oklahoma's "Nye" case, preference rights were found to be unconstitutional.

The basis of the bidding also varies among states. State bidding systems establish the bidding currency as an annual lease payment per AUM, or an annual lease payment per acre, or a bonus payment. AUM or per acre payments are essentially cash rents to be paid each year for the duration of the lease. In the bonus payment system the annual AUM rate or per acre rent is pre-set by the state and the competition for the lease is decided by a one-time, up-front payment.

There is no clear trend for preference right states and non-preference right states to use a particular bidding currency. An advantage cited for the bonus payment system is that it reduces "spite bidding" (Roy Henderson, Washington, 1992). A spite bid occurs in preference right states, when one rancher maliciously attempts to increase the lease costs to the existing leaseholder by submitting an inflated bid for a lease. The bonus payment system requires cash up-front, which reduces the likelihood of perfidious bids. A detriment of the bonus payment system is that the cash up-front requirement is disadvantageous for ranchers with limited access to expendable cash.

Leaseholder Rights and Responsibilities

The differences between leaseholder rights and landlord services on public and private lands are sometimes cited as justification for lower leases rates for state grazing land. Nebraska and Oklahoma feel their lease agreements provide the lessee with virtually the same rights and privileges that are awarded in a lease for private lands, and charge full market value for their leases.

Public hunting and fishing access to leased state lands is a contentious issue in many western states. In the majority of western states, the public has a right of access to state lands for hunting and fishing. Public access is accused of causing or contributing to forage damage, spreading weeds, damage to fences, and livestock losses. However, none of the states interviewed cited the public access as significantly devaluing state lands for grazing.

In most states, ranchers are restricted from "posting" or refusing public hunting access to state leases, except under extraordinary circumstances. This differs from private lands, where the leaseholder can control public trespass. A private land leaseholder may also charge the public for recreational access to leased lands. Most western states do not allow lessees to charge the public for hunting or fishing on their state leases.

Exceptions to the public right of access state land occur in Colorado, Nebraska, Oklahoma, Alaska, and Texas. In these states leaseholders are allowed to post state lands. Leaseholder are also allowed to charge hunters for the right to access. In Texas, hunting rights to state lands are leased separately from grazing rights, but both leases are generally controlled by the same individual. Texas's base rates are $0.35 an acre for a deer hunting lease and $0.15 an acre for a quail and dove lease. Colorado is considering changes to current public access policies which would expand the public's right to access state grazing land.

States and private lessors are likely to have similar expectations for lessees to carry out responsible range management. In some states, range management plans and guidelines are prescriptive. An advantage of a private lease is greater flexibility to accommodate localized conditions and individual land management preferences. Greater flexibility could under some circumstance allow private leases to be more productive or less costly to operate than state leases.

Generally states do not participate in the funding of range management activities or the financing of weed control, fencing or water improvements. Most states expect the lessee to carry out normal property maintenance and weed control, but do not expect lessee to pay for major repairs to state owned improvements. Where a lessee pays for on-site improvements, such as fencing, the improvements remain the property of the lessee. If the lease changes hands, the former lessee has a right to remove the improvements or be compensated by the ensuing leaseholder. If a state participates in a cost share of a improvement, the terms of ownership are spelled out in the cost share agreement.

In Oregon, the state is willing to share costs of water development, weed control, reseeding of state leases where it will improve rangeland productivity. Oklahoma occasionally pays for terraces and wells. Wyoming and North Dakota participate in cost sharing for weed control. There is no relationship between the level of state cost sharing of rangeland improvements and state lease fees. Oregon and Wyoming provide substantial cost share programs, but have low AUM rates.

In only a few instances have states attempted to monetarily define the bases of the differences in the lease rates for public versus private lands. The best example is in North Dakota, which provides the lessee with a $1.50 per acre credit where state parcels are not fenced. The absence of fencing is often cited as a factor which diminishes the value of a state lease. Included in North Dakota fence deduction are estimates of the costs of materials, interest, labor, and depreciation.

North Dakota also makes site specific adjustments to its lease rates for carrying capacity, noxious weeds, permanent improvements (water development, seedings), lack of water, and multiple use management.

Subleasing

Most, but not all western states allow leaseholders to sublease land to other ranchers. Leaseholders are required to notify the state when they sublet a state parcel. Subleasing is only allowed when there is no change in use (grazing only) and terms of the state lease agreement are complied with. Where lease rates approach full market value states report little subleasing activity (Richard LeBlanc, Nebraska, 1992).

States vary in their participation in the "sandwich profits," resulting from subleases. Hawaii claims nearly all additional income generated by a sublease (sublessors are allowed to recover transaction costs), Wyoming splits the profits (50%:50%) with the original lessee; Utah demands $1.00 an AUM from any sublease. Montana may be the least entrepreneurial of the western states allowing leaseholders to pasture state lands for up to twice the base AUM rate stipulated in their agreement with the state. The leaseholders are allowed to keep all of the profits from the pasturing agreement as compensation for management of the land and livestock.

Miscellaneous

In most states, public lands are exempt from state and local property taxes. Lease rates on private lands must necessarily include cost recovery for property taxes paid on the land. The tax exempt status of state lands is used to justification for lower lease rates for state grazing lands. Minnesota reduces its agreed on lease rates by 1 1/2 percent to account for the tax exempt status of state land.

North Dakota does require ranchers to pay property taxes on land leased from the state. South Dakota's lessees also used to pay property taxes, but the state's supreme court recently disallowed taxation of state owned property. Washington's AUM rate includes a 12.84 percent surcharge which is used to compensate local governments and schools for foregone property tax revenue due to state land ownership. Utah adds $0.05 to its AUM rate for weed control and transfers this money to the local weed control district. Montana's legislature makes a small appropriation (e.g. $265,000), to compensate the counties for property tax losses due to state land ownership. The fund is divided among the 16 counties where state land is over 6 percent of the total land area. The legislative appropriation is considerably less than the what counties would raise if the land were in private ownership.

4. Cropland Leases

Montana leases approximately 560,000 acres that are dedicated for crop production. In 1992, the state received $8.7 million in revenues for the beneficiaries of the school trust. Revenues from crop leases have fluctuated from year to year, a result of variable yields and market prices for agricultural commodities (Table 3). Montana crop leases are primarily for production of

Table 3

Montana Revenue from Cropland Leases
1983-1992
(in millions of dollars)

1983	$ 8.2
1984	8.7
1985	6.3
1986	4.4
1987	7.2
1988	8.9
1989	4.9
1990	7.4
1991	7.6
1992	8.7

1992 average income per acre = $15.50

wheat, barley, and alfalfa hay. In 1992, the state averaged about $15.50 an acre for its cropland leases.

Montana has more state land in crop production than do most other western states. This mainly results from Montana retaining most of its original trust lands. Wyoming with 720,000 acres, Nebraska with 300,000 acres, Colorado with 240,000 acres, Washington with 170,000, Arizona with 160,000 acres are the other western states with major large amounts of land leased for crop production. Typically, western states sold most land with crop producing potential early in statehood.

Management Objectives

States' management objectives for cropland leases are the same as for the grazing lands. States generally strive to maximize revenues for the school trust and other designated beneficiaries, while protecting the long-term well-being of the state land resource. More than is the case with grazing leases, states endeavor to achieve close to full market value for there cropland leases.

Leasing Systems

State leasing systems for cropland are either cash rents or crop shares (Table 4). Cash rent is a fixed annual payment to the state usually based on a fee per acre. Crop share can either be a percentage of the crop produced or a percentage of the gross sales from a state parcel.

Most states use cash rent leasing systems. In a cash rent lease, the state receives a fixed payment irrespective of the crop production or market conditions. Another advantage of cash rent leases is that they are economical and uncomplicated for states to administer.

In a crop share lease, the state and lessee share burden of the farming risk. Where yields and prices are favorable the state is likely to achieve higher income than it would receive from cash rents, but the state also experiences depressed earnings when yields or crop values are low. Again, Table 3 illustrates the year-to-year variability of Montana's income from crop shares.

Crop share lease systems are expensive and complicated for a state to administer effectively. A state should actually monitor lease specific crop production in order to insure that it receives its fair share. Hawaii hires auditors to monitor production from its crop share leases. This is justified and affordable because of the extremely high value of the crops grown in Hawaii. In dryland farming regions such as Montana, states tend to use the "honor system" to obtain their shares of crop production or gross sales (Jeff Hagener, Montana, 1992) (Roy Henderson, Washington, 1992). Because most leaseholders farm more than just a state parcel, it is difficult to segregate production from state lands a from a farmer's total production. Montana and Washington cite the inability to effectively monitor production on state parcels as a major shortcoming of crop sharing.

Table 4

Cropland Lease Characteristics

State	Lease System*	Basis of Min. Rate*	Term* (Yrs)
Arizona	cash rent	mkt studies	10
California	cash rent	% est.crop val & comps	5-20
Colorado	cash rent	25% est.crop value	10
Hawaii	crop share	3-8% of crop value	
Idaho	cash rent	33-50% est crop value	10
Louisiana	crop share	20-25% crop value	5-10
Minnesota	cash rent	mkt studies	3-5
Montana	**crop share**	**25% of crop value**	**10**
Nebraska	cash rent	mkt studies	5-12
North Dakota	cash rent	mkt studies	4
Oklahoma	cash rent	mkt studies	5
Oregon	crop share	25% crop value	*10
South Dakota	cash rent	mkt studies	5
Texas	cash rent	mkt studies	5
Utah	cash rent	25% est of crop value	*15
Washington	crop share/1	25-33% crop value	*10
Wyoming	cash rent	4% appraised land val.	10

* where available table displays information for dryland leases. Some states have separate leasing systems for different crop types.

1/ Washington also has cash rent leases.

Where the state actually receives a percent of the crop produced, it must store and market the crop itself. This is an administrative disadvantage of receiving a physical share of the crop produced.

Bidding:

States which impose automatic renewal or preference right systems for grazing leases are likely to use a similar system for renewing cropland leases. Likewise, states using open bidding systems (without leaseholder preference rights) for grazing leases use open bidding for cropland leases. States with open bidding use auctions to award leases. The frequency of competitive bidding is greater for cropland leases than for grazing leases, however, the vast majority of cropland leases also are awarded non-competitively. An exception is Hawaii, which has competitive bidding on nearly all of its cropland leases.

Where bidding occurs, a state will always receive more income than if leases are awarded non-competitively. The bidding for cropland lease may be an annual cash rent payment, a one-time bonus payment, or a percent of crop production. In Montana, bidding is based on a percent of production (actually the value of crop production).

Determination of Minimum Rental Rates

Determination of minimum lease fees is important because most cropland leases are awarded non-competitively. Minimum cash rents are typically based on studies of rental rates or the value of crop production for comparable private lands. In most cases, states rely on the agricultural statistics generated by the USDA to identify prevailing cash rents. The USDA publishes agricultural statistics by geographic sub-region. This allows states to institute variable cash rents based on local conditions. A few states use state department of agriculture studies to identify comparable rents and crop values.

Some states base their minimum cash rents on a percentage of the assumed value of production from the state parcel. This system differs from a crop share system in that the cash rent is a fixed amount, and is paid irrespective of actual production or crop prices. Cash rent is typically 25 percent of the estimated the value of production from the state parcel. Estimates of crop yield and production values are most often also based on USDA or state department of agriculture statistics.

Cash rent in Wyoming is 4 percent of the appraised value of the agricultural land. Wyoming cash rents for dryland wheat range from $4.05 (15 bu./acre) to $10.75 (40 bu./acre) and averages $6.85 (25 bu./acre) (Jamie Van Hatten, Wyoming, 1992). In Utah, annual cash rent for certain irrigated cropland is determined by multiplying the market value of land by the prime interest rate.

Cash rents generally vary by land productivity and regional rental market characteristics. For example, cash rents for Oklahoma's dryland wheatland range from $7.50 to $19.00 an acre; or typically about a $1.00 a bushel for production years (John Taylor, Oklahoma, 1992). Nebraska receives $15.00 to $20.00 an acre for dry cropland. Idaho receives from $10.00 to $12.00 an acre for dry cropland.

Only one state, North Dakota, a charges a flat rate for all of its cropland. The state receives $15.00 acre for crop and $7.50 an acre for hay production. North Dakota intends to change its lease fee system (Mike Brand, North Dakota, 1992).

Montana, Washington, Louisiana and Hawaii are states using a crop share system. Montana's crop share is normally 25 percent of the value of dryland wheat or barley production. It is common for leases for Montana's private lands to provide the property owner with 33 percent of the crop value. Washington's share of dryland wheat production ranges from 25 to 33 percent. Louisiana typically receives about 25 percent of crop values. The major crop grown on state lands in Hawaii is cut flowers. Hawaii typically receives 3 to 8 percent of the flower producers gross sales.

Lease Terms:
Basic cropland leases are typically from 5 to 10 years. Several states are willing to extend leases in instances where the lessee commits to make substantial capital improvements on the lands. For example, the installation mechanical irrigation system could be grounds for issuing a longer-term lease. Where orchards and vineyards are proposed for state parcels, Oregon, Washington, and California states may award leases for 20 to 40 years.

CRP
Where a state uses a crop share leasing system, the state is generally entitled to receive a share of the payment from the federal government. In Montana, the school trust receives 50 percent of CRP payments. In most instances, a share of CRP payments is the same as its share of crop production. Texas cited difficulties in receiving its share of federal payments as the reason it switched from a crop share to a cash rent leasing system. States with cash rent systems receive their annual rents irrespective of whether the state land is in production and do not receive a share of CRP payments.

5. Commercial Uses of State Lands

Commercial leasing is a growing source of revenue from state lands. Commercial uses include a broad range of non-agricultural enterprises, residential land uses, and public facilities. Examples of commercial uses occurring on state lands include shopping malls, industrial parks, airports, truck stops, marinas, yacht clubs, ski resorts, eating and drinking establishments, fast food restaurants, office buildings, golf courses, apartment complexes, feedlots, construction storage areas, landfills, communication towers and facilities, fire stations, helicopter landing pads, billboards, movie sites, and single family home subdivisions.

With the exception of Arizona, which began to lease significant amounts lands for commercial uses in the 1950s, western states are relatively new to commercial leasing. A half dozen states now have sophisticated commercial leasing programs in operation. Several other states are now aggressively cultivating commercial uses of their lands.

Montana, like most of the less populated western states, collects little revenue from commercial uses of its state lands. Montana currently administers a small number of "special use permits" allowing uses such as a golf course, water slide, fast food restaurant, day care center, and plant nursery to operate on trust land. In 1992, commercial uses generated less that $20,000 in annual income for the school trust fund.

Management Objectives

The objective of commercial leasing in western states is to maximize income to the state. States see no appreciable difference in the market value of state lands compared to similarly situated private lands. In keeping with their trust mandates, western states strive to obtain full market value from commercial users of state property. Furthermore, states aspire to achieve the "highest and best uses" of their commercial properties; in order to secure the greatest long-term return for the trust.

Revenues from Commercial Leases

There are great differences in the levels of commercial leasing occurring within western states. Table 5 displays annual revenues for western states earning more than $50,000 from commercial leases. Not included in the totals are revenues from outright sales of state lands to commercial developers. This most often occurs when lands are to be developed for residential land uses.

States which are earning the most income from commercial leasing are the states which have retained land holdings in areas experiencing substantial urban or resort type growth.

Arizona is the western state which earns the greatest amount of income from commercial leasing of its state lands. In 1992-1993, Arizona expects to earn $10 million from commercial leases. This state acknowledges that the major reason for its success in commercial leasing is its retention of considerable holdings in the Phoenix and Tucson urban areas (Ron Ruziska, Arizona, 1992).

Unlike the western states which sold most of their lands around developing cities, Arizona retained ownership of land near Phoenix and Tucson. Since the 1950s, the two urban areas have been undergoing extraordinary urban expansions. Arizona's state lands stood in the path of natural urban development. Initially the state had to be pressured by developers into allowing commercial and major residential-type development to occur on its property. As the state became aware of the earnings potential of its urban holdings, it began to manage its urban lands for commercial use and high return residential uses. In 1992, commercial leases account for two-thirds of the revenue from surface uses of Arizona state lands.

Like Arizona, Washington and Hawaii retained ownership of most of their original state lands. Western Washington and selected areas of Hawaii have undergone considerable

Table 5

State Revenues from Commercial Leases of State Land/1
(includes only states with $50,000 or more in annual revenues)

	FY1987-1988	FY 1989-1990	FY 1991-1992
Arizona	$6,018,000	$7,922,000	$7,976,000
Washington	606,000	2,300,000	2,341,000
Hawaii	1,910,000	2,200,000	not available
New Mexico	347,000	608,000	900,000
Texas	788,000	537,000	570,000
Colorado	317,000	402,000	483,000
Oklahoma	42,000	233,000	352,000
California	0	225,000	not available
Alaska	9,000	170,000	172,000
Oregon	260,000	122,000	164,000
Minnesota	100,000	105,000	97,000
Idaho	20,600	50,000	1,305,000/2
Louisiana	not available	50,000	150,000
Montana	not available	not available	25,000

/1 States definitions of commercial land uses vary.
/2 Idaho's income is primarily from cabin leases.

population and economic growth. Urban expansion in Washington and urban and resort growth in Hawaii have made strategically situated state lands valuable for commercial and residential land uses. New Mexico is another state which retained much of its original state lands. New Mexico has been successful in leasing lands for commercial uses in the growing Albuquerque, Sante Fe, and Las Cruces areas. Alaska is another state which is profiting from commercial leasing in expanding urban areas.

In the 1980s, Washington further expanded the commercial real estate holdings by purchasing additional urban real estate. To do this, Washington initiated a state "land bank," which allowed revenues from sales of trust lands to be used to acquire additional real estate on behalf of the trust. Washington's ability to reinvest in new lands allows it to be an active rather than passive participant in the state's land market.

States which have sold large portions of their original grant lands have most often sold the property which would be the most valuable for commercial land uses. **California, Colorado, Texas and Oklahoma** are examples of states which now encourage commercial uses of state lands, but long ago sold off much of their commercially viable properties. Colorado retains 60,000 acres which it considers to be in the "path of development."

Texas, California, and Colorado have established land banks or escrow account systems to purchase commercial real estate in metropolitan areas. For example, Texas now assembles revenues from the sale of west Texas rangeland to purchase raw land in expanding urban areas. Colorado recently used land bank funds to purchase lands in the vicinity of Denver's new professional baseball stadium.

Montana is one of 11 western states which has little or no commercial development on its state lands. In most of these instances, states have sold off state lands in developing areas and/or have never experienced the kind of urban expansion which would motivate significant private sector interest in commercial development of state properties.

Retention of Lands with Development Potential

The single most important factor affecting the commercial leasing potential of state lands is the location of the state's holdings relative to developing areas. As noted earlier, states which retained trust lands in expanding metropolitan areas have benefitted tremendously from owning lands in the path of development. Other valuable state properties are lands along major travel corridors and in resort and recreation areas. One of Oklahoma's most profitable commercial leases is a truck stop along an Interstate Highway. Wyoming identifies its trust lands in the Jackson Hole area as some of its most valuable property.

Land managers in California and Oregon express regret that their predecessors sold lands which are now worth millions. At various levels of refinement, many states conduct assessments to identify state lands with long-term potential for commercial development. States with well developed commercial leasing programs, Washington, Hawaii, and Arizona have commercial staff who complete comprehensive evaluations of urban properties. New Mexico hires consultants to assess the commercial potential of trust lands near its major cities. Oklahoma used its field staff to identify 40,000 acres of land with commercial development potential.

Montana still owns about 88 percent of the original lands granted to it at statehood. Most of this land is in rural areas with no foreseeable commercial development potential. However, the state has also held on to parcels which lie in or near the state's rapidly growing areas.

Statutory and Administrative Considerations

Montana law and administrative rules are flexible enough to allow the state to lease trust lands for almost any viable commercial land use. Only Oregon and North Dakota appear to have statutory or administrative rule restrictions which essentially prevent commercial uses of state lands. North Dakota law permits only pasturing and meadowing uses, and Oregon prohibits construction of permanent structures on state land.

All states have the right to refuse to lease for commercial uses which they deem inappropriate. States will accept or reject a proposal based on a determination of what is in the best interests of the trust. Most often states will employ a highest and best use criterion to review a development proposal. Arizona and Texas point out that it is important for leasing decisions to be based on an analysis of the long-term development potential of an entire parcel, and to avoid incremental developments which are likely to restrain or devalue the long-term earning potential of the overall parcel.

Texas, Washington, and Arizona attempt to administer a few large commercial leasing projects rather than numerous small projects. Texas feels high administrative costs make small scale developments unprofitable. Texas and Arizona favor a master lease approach for large and complex commercial development projects. In a master lease, the state lease is with one developer, who consummates the financing, and development of the overall commercial venture.

The states will consider interim land uses for parcels where land uses are in transition. Interim uses are intended to produce revenues for the trust, until the long-term highest and best use can be developed. An example of an interim use is a construction storage site.

Lease Terms

Lease terms generally will define the nature and characteristics of the land uses to occur on the state parcels. Changes in the specified land uses or physical changes to the commercial improvements will most often require state approval. Major changes may serve as grounds for the state to require renegotiation of a lease. Subleases are also likely to require state consent.

In order attract private sector development on state lands, leases must be lengthy enough for developers to obtain financing and achieve a favorable return on their investment. Where state statutes establish maximum a lease term of 5 or 10 years, the lease term limits are viewed as constraints to commercial leasing. New Mexico and Idaho view thier 5 and 10 year maximum lease terms as a major obstacle for developers trying to obtain financing or to recruit investors for projects on state property (Pleaz Glenn, New Mexico, 1992). New Mexico provides current commercial leases holders with a "preference right."

State lands administrators suggested lease terms ranging from 20 to 40 years are necessary for many types of commercial developments. Most states require the state land board to approve long-term lease agreements. Montana has the option of entering in to long-term lease agreements if it is in the best interest of the trust.

States generally base their lease fee on a percentage of the appraised value of the land (as commercial land). It is also commonplace for states to collect a percentage of the gross sales or profits from commercial lessees. Arizona, Texas, Hawaii, Washington, and California all of which have well developed commercial leasing programs, strive for 8 to 10 percent of the appraised value as an annual cash rent. In these states, the trust's share of lessee gross income (sales) tends to range from 1 to 2 1/2 percent. In Colorado, Wyoming and Wisconsin, the cash rent is typically between 5 and 6 percent of the value of the land.

The specific financial terms of a commercial lease are generally negotiated by the state and the commercial developer and may vary from lease to lease. Hawaii and Texas cite instances where the state accumulates little income in the early years of a lease in order for the developer to recover costs. In these instances, the lease rates and percentages of gross are accelerated over time. As the commercial venture becomes more financially secure and prosperous the state earns more income. States may also issue lease terms requiring a nominal rental fee, but a high percent of businesses income. Arizona has a golf course on state lands from which it receives minimal fixed rent, but 16 percent of gross sales. Hawaii has a golf course lease in which it receives different percentages of green fees, golf cart rental, and bar fees. States stress the need to be flexible in negotiating lease agreements.

Arizona bemoans that in its early years of commercial leasing it entered into numerous long-term leases at "give away" rates (Ron Ruziska, Arizona, 1992). Most contemporary lease agreements contain a lease review clause which allows states to regularly review and adjust lease fees to accommodate changes in land values and business growth. It is typical for lease reviews to be every 3 to 5 years. Some states build in automatic annual adjustments to lease rates based on the Consumer Price Index. A criticism of using the inflation rate for an adjustment factor is that local real estate values often behave independently of national inflation patterns (Don Reese, California, 1992).

Marketing of Commercial Lands

Most states wait for developers to come to them with proposals. A few states, e.g. Arizona, actively promote development of specific state lands through advertisements in newspapers. Some states will issue Requests For Proposals (RFPs) to attract commercial developers for targeted state lands. Alaska is using an RFP process to attract bidders for a proposed Hatcher Pass ski resort (Ron Swanson, Alaska, 1992). Before Utah auctioned 12 state residential parcels in its Park City area, it advertised in in-state and major California newspapers.

Bidding Processes

States are divided on requiring public bidding on commercial leases. States require appraisals for all land sales and major commercial leasing transactions. States are prohibited from entering into commercial lease agreement unless they receive full market value for the lease interest (the exceptions are Louisiana and Alaska which occassionally issue leases at 90 percent of market value).

Some trust land administrators are critical of state requirements for public bidding and public involvement in commercial leasing. In most instances, commercial leases of state lands occur as a result of the initiative of private developers. Prior to public bidding, the state and initiating developer have had extensive negotiations and have tentatively agreed on lease terms. A state agency has done an evaluation of the proposed use and an appraisal of the market value of the land, and feels it has negotiated an agreement which is in the best interest of the trust. State also cite resistance by private entrepreneurs to enter into a process where their real estate and their business development plans become public information.

Not all states require that long-term commercial leases be awarded through public bidding. In Texas and Colorado, administrative staff is responsible for negotiating lease terms which are in the best interest of the trust. The public review of commercial lease agreements occurs when the agreement is presented to the land board for approval.

Where public bidding is required, the bid processes may be oral public auctions or sealed bids using a Request for Proposal Format. In either case the state is likely to issue a bid package specifying intended uses of the land, lease provisions, and the minimum acceptable bid. New Mexico, Oklahoma, and Louisiana require public auctions for commercial leasing. Arizona may administratively approve leases of up to ten years, but must go to auction for longer term leases. Alaska may use either an auction or an RFP process to award a commercial lease. Alaska choose to use an RFP prcoess to create competition for ski resort proposal (Ron Swanson, Alaska, 1992).

A public bidding process is mandatory for sales of state land for private commercial land uses. States use either an oral auction or sealed bids for sales of lands. States are required to receive at least full market value for the state property. There are instances where bidding has resulted in sale prices much more than market value for their property. Utah referred to a "bidding frenzy" which resulted in 12 Park City area recreation home sites selling for 170 percent above appraisal (Gary Bagley, Utah, 1992). States will often sell property for public purposes without going through a bidding process. Government entities are still required to pay full market value (Rich Scribner, Washington, 1992).

Coordination with Local Governments

It is necessary for states to coordinate their plans for commercial development of state property with local government land use planning activities and infrastructural improvements. In many states, for example Washington, local governments have the right to zone state lands. State officials emphasized that working effectively within local land use regulations is best accomplished by early involvement of local officials in planning the development of state lands. Access to local government services is essential for many commercial land uses and this also best accomplished through coordination with local officials early in the conceptualization process.

Local governments and private citizens are often unaware of the state's responsibility to maximize income from state lands on behalf of the school trust. These groups view state land as perpetual open space. Washington cites examples in urbanizing areas where local governments and citizens have opposed conversion of agricultural uses to higher commercial or residential uses.

Project Oversight

It is typical for a state to require commercial lessees to submit an annual financial report. States are also likely to require the right to access the lessees tax record (Mason Young, Hawaii, 1992). This stipulation is particularly important where a portion of the lease rental is determined by a percentage of gross sales or profits. In Texas, staff persons are assigned to specific state properties, and are involved in initial assessment of land capabilities, reviewing proposals, negotiating and executing lease agreements, and overseeing the long-term management of the lease.

States with large commercial leasing programs have specialized staff dedicated exclusively to the marketing and management of commercial properties. Texas, New Mexico, Washington, and Arizona have commercial property management agencies. A few states have in-house appraisers. In most states the appraisal is done by a independent appraiser. Appraiser fees are generally borne by the lease applicant, either through a direct payment or indirectly through the state's application fee requirements.

6. Recreation

General Public Access and Compensation to the Trust

Particularly in the Rocky Mountain region, recreational access is a controversial issue which pits farmers and ranchers against hunters and fishermen. In the majority of western states, the public has a legal right to access state lands for recreation. The purposes for which the public has a right of access vary by state. In Montana, the public has the right to access for hunting and fishing only. In Arizona, an access right is only provided for hunting. In Minnesota, recreation access is assured for hunting, fishing, hiking, cross country skiing, bird watching, berry picking, and numerous other forms of dispersed recreation.

In states where the public has a guaranteed right to recreate on state land, it is illegal for the lessees to refuse public access. A leaseholder can temporarily restrict public access to prevent damage to unharvested crops, or when livestock are grazing a state parcel. A leaseholder may also request permission to "post" state land for other reasons, but a state is not likely to authorize restrictions of public access except for compelling reasons. A lessee is unlikely to gain permission to permanently close land simply because the lessee does not want the public to use a state parcel. Some states impose fines for unauthorized posting of state lands.

In most of the public right of access states, the public's right of entry to state lands is for "walk on" access only. The public may only enter on to state lands by public road or other publicly owned property or right of way. The public does not have a right to cross private property to use state land for recreation. An important restriction on public access in Montana is that most state land is not accessible by road. This means is that access to most state parcels is indirectly controlled by surrounding landowners, and recreationists must gain permission from a person controlling surrounding land to use an inbound state parcel.

In states where the public has a legal right of access, leaseholders may not charge the public for permission to hunt or fish on state property. Again, the difficulty with this stipulation is that state lands are often completely surrounded by privately owned land. Owners or leaseholders of private lands may legally charge for access to the private lands; however, in many instances access to inbound state parcels is included in the package of hunting or fishing opportunities afforded by the payment for recreation access.

An important issue involving public recreation on state lands is whether the public should pay for this personal use of school trust lands. Most states do not impose fees for public access, even though the recreationists receive a private benefit from use of trust lands. Most state interpret of enabling legislation and constitutional mandates to specify that the trust lands shall be used for the benefit of the beneficiaries and private uses of trust lands may not occur unless the trust is compensated for the use. States often make hunting and fishing exceptions to this requirement.

Montana and Utah are the two western states which have attempted to compensate the trust for recreational uses of trust lands, while still providing the public with a right of recreational access state lands. In Utah, the hunting license fees include a $1.00 charge which is reverted to the school trust. Montana issues a $5.00 permit which authorizes hunting and fishing uses of state lands. Montana's permit system was initiated in 1992 and several states expressed interest in how well it is working.
In Minnesota, state agencies pay a lease fee to the trust for recreational uses of state lands, and recoup a portion of these expenses through entrance fees to parks, and license fees for

hunting, fishing, boating, cross country skiing, etc. However, the lease fee revenues do not adequately compensate the trust for the value of the recreation uses. Minnesota points out that its school taxes are among the highest in the country, so indirectly the trust beneficiaries are compensated by the tax income.

Alaska, Colorado, Texas, Nebraska, and Oklahoma do not guarantee the public a right to access state lands. In these states the hunting and fishing rights to state parcels go to the lease holders, who may charge the public for hunting and fishing on their state leases.

The most unique leasing system is in Texas, which issues separate leases for livestock grazing, deer hunting, and game bird hunting. Texas's base rate for deer hunting is $0.35 an acre for deer hunting and $0.15 for dove and quail hunting. Of Texas's 860,000 areas of state land, approximately 450,000 are leased for hunting. Texas's rates for hunting leases are based on studies of private lease rates (Ned Polk, Texas, 1992).

In Texas, grazing rights and hunting rights can be held by separate parties. The grazing leaseholder has the first right to bid on a hunting lease (similar to a preference right), and in most instances the same individual holds the grazing and hunting leases. Where grazing and hunting rights are held by different parties there have occasionally been conflicts between the leaseholders. There are also a few instances where Texas leases out tracts exclusively for hunting. The most profitable example is a 5,500 acre tract for which the state receives $28,000 in annual income.

Where Texas state land is used by professional outfitters, the state receives a 35 percent share of a guiding fees and a share of other special revenues accruing to the outfitter. If the outfitter charges a hunter an additional $1,000 for a successful deer hunt, the state will receive 35 percent.

Where Texas leases hunting rights, it also initiates programs to manage the wildlife resource. These can include improvement of grassland conditions and development of watering systems. The state also monitors deer populations, and regulates the amount of game which can be harvested.

In Nebraska, the right to charge for hunting must be included in the terms of a lease agreement. The Nebraska school fund is compensated for hunting uses of trust lands through additional lease fees paid on land with marketable hunting values. Where hunting on Nebraska state lands is likely to generate revenues for the leaseholder, Nebraska attempts to account for the value of the hunting rights in the minimum bid rate it sets for the lease. Where competitive bidding occurs, the value of hunting rights may also be reflected in higher bidding for the state leases with hunting attributes.

In Alaska, Oklahoma, and Colorado, leaseholders are granted property privileges similar to the rights they would receive if they were leasing private lands. Included in those privileges is the right to exclusive use of the state land, which includes the right to post the land to exclude public access. Also bundled within the leaseholder privileges is the right to charge the public for recreating on the state lands.

In Oklahoma exclusive hunting and fishing rights are included in the privileges granted to the agricultural leaseholder. Oklahoma feels the value of state land for recreation is reflected in the bidding price of the land. Oklahoma cites examples where bidding has gone "sky high," for parcels with exceptional hunting. Oklahoma is also beginning to lease state land exclusively for hunting (John Taylor, Oklahoma, 1992). The school fund is compensated for the hunting uses of trust lands through the additional lease fees paid on land with marketable hunting values.

Colorado's leases provide the leaseholder with exclusive control over recreational uses of the leased land. Leaseholders may charge hunters or fishermen for recreational access. Ostensibly, Colorado is receives a 50 percent share of the gross income the leaseholders receive from recreationists. However, the state has no effective system for enforcing this requirement and collects little income from its leaseholders. Colorado also leases state lands exclusively for recreation at $2.00 an acre. The Colorado Division of Wildlife also leases trust lands from the state for public recreation. The Division of Wildlife pays the same lease rates as do private individuals.

Colorado is in the process of revising its approach which establishes exclusive land uses in favor of a system of allowing for multiple uses of state lands. One approach being considered would create separate leases for agriculture and recreation. This system is predicted to produce an additional $1 million a year from state lands.

Alaska allows agricultural leaseholders to charge for recreation access, and does not receive a share of income accruing to the leaseholders.

Outfitters

Montana is initiating a fee system for permitting professional outfitting on state lands. Montana does not have a formal fee structure for outfitting permits. Permit fees are determined through negotiations with the outfitters. The state considers the anticipated gross revenues of the outfitter, the role state lands play in the outfitter's business, and the amount and character of the state land being used in setting the permit fee. Fees are paid as a one-time cash payment.

Montana's state parcels are often surrounded by lands permitted for outfitting by the U.S. Forest Service. The forest service charges outfitters 3 1/2 percent of their gross income for outfitting. Montana feels it can not implement a fee system based on a percentage of gross income, because it doesn't have staff to carry out necessary auditing functions. Montana strives to negotiate the equivalency of a 5 percent share of the outfitter's gross income, but this percentage varies per negotiation. State fees for outfitter permits range from $100 to $5000 per year (Jeff Hagener, Montana, 1992). Approximately 75 outfitting permits were issued in 1992. Outfitter participation in the permit system is likely to increase as they become more accustomed to paying for the privilege of providing outfitting services on state lands. The Montana Department of Commerce is in charge of outfitter permitting. The Montana Department of Fish Wildlife and Parks is responsible for field enforcement. FWP intends to issue warning tickets to violators in 1992.

Most western states do not have significant outfitter use of state lands. In Colorado and Texas, outfitters bid on exclusive hunting rights for state parcels. In addition to the lease fee, the states also receive percentages (35 percent in Texas and 50 percent in Colorado) of the guiding fees and bonus payments accruing to the outfitter.

Alaska permits outfitters to establish base camps on state lands and receives an average of 3 to 4 percent of the outfitter's gross revenues. Idaho charges outfitters $200 to locate a spike camp and $400 to locate a base camp on state lands. In Wyoming, outfitters pay $0.15 an acre or a $150 minimum to guide hunters on state lands. In all three states, outfitters are permitted to provide outfitter services within a specified area, but may not restrict the general public from using the same area.
Minnesota's fees for base camps on state land are founded on fair market values. Minnesota reviews fees received for base camps located on private lands.

Commercial Recreation Uses

States tend to treat commercial recreation uses, for example marinas and hunting lodges, like other commercial land uses. Lease fees are generally determined as a percent of the market value of the land. Some states also receive a percent of the business's gross income. Such lease agreements are generally the result of negotiations between the state lands administrators and the private entrepreneur. Minnesota has concession agreements with private vendors at resort areas, and receives a flat occupancy fee plus a percent of the business's gross revenues.

Special Recreation Uses

Some states also have systems for leasing lands for special recreational uses. Horseback riding, motocross, anf snowmobile are examples of uses of state lands for which state land agencies issue special use permits. State revenues generally include an application fee and a user fee based on the nature of the use. Montana issues special use licenses for horseback riding, berry picking, photography, bird watching, snowmobiling. A special use license may allow for a recreational use of a state land leased for other purposes. Where state land is unleased and unlicensed, Montanans have a general right of access to state lands and do not need to obtain licenses for special recreation activities.

7. Cabin Site Leases

The Montana Department of State Lands administers 618 cabin site leases on state lands. Most of these leases are located in forested or lakeside areas of western Montana. A small number (155) of homesite leases are in eastern Montana. In 1992, lease fees from cabin sites generated $259,000 income for the state. The average annual rent for a state cabin lease was about $420 a year.

Montana is one of only a few western states which administers a large number of cabin site leases. Alaska, with over 5,000 private cabin leases, has by far the most leases. Because most of Alaska's state land is not school trust land, it is not bound by the same revenue maximization mandates that govern the older states. Minnesota had about 2,000 cabin lease, but has recently sold over half of these leases. Idaho with about 600 leases is the other western state with significant numbers of cabin leases.

Profitability of Cabin Leases

Some states view cabin leases as costing much more to administer than they generate in revenues for the school trust. Except in Alaska, most state cabin leases were awarded decades ago. Often states entered into long-term agreements for a fixed annual rents, for example $50 a year, which have over time have evolved to being far under market value. In addition, states commented that cabin leases are expensive to administer because of their scattered locations and the difficulties of working with numerous individual leaseholders. Minnesota, Oregon, and Washington feel they are losing money on their cabin sites.

Idaho feels it is returning a substantial profit from cabin leases. Albeit not as profitable as in Idaho, Montana also feels its generates substantially more revenue from its leases than it costs the state to administer them (Jeannie Fairbanks, Montana, 1992).

Fee Systems

States receive annual cash rent payments for their cabin site leases. Lease rates for state-owned cabin sites are generally determined through a graduated fee system or a percentage of the market value of the land (Table 6). Where graduated fees are imposed, the fees assigned were based on staff judgements which differentiate between higher value and lower value leases. Utah charges $800 for its high value cabin sites and $400 for its lowest value cabin sites. In Louisiana, the cabin site rents range from $100 to $300.

Where lease fees are based on a percent of the cabin site's appraised value, states are required to conduct periodic appraisal of the land's value. A important consideration in the appraisal is whether the cabin site is treated as recreational home property or as raw land. In Wyoming, cabin sites are treated as raw land, which results in very low appraised values. Wyoming acknowledges that this system greatly undervalues its cabin site properties. Average cash rents for Wyoming leases are only about $50 a year (Jamie Van Hatten, 1992).

In Montana, Idaho, and Minnesota, state leases are treated as recreational homesites. Lease rental rates are 2 1/2 percent of appraised value in Idaho, 3 1/2 percent in Montana, and 5 percent in Minnesota.

Idaho's cabin sites are located at Priest and Payette lakes. The value of real estate surrounding theses lakes has increased dramatically, and this is reflected in high appraised

Table 6

Determination of Cabin Site Lease Fee

	Method of Determining Lease Fee
Alaska	bid or comparable market values
Idaho	2 1/2 % of appraised ($700 to $3,000)
Louisiana	graduated fee system ($100 to $350)
Minnesota	5% of appraised value
Montana	**3 1/2 percent of appraised value ($200-$1,000)**
Oregon	flat fee of $250 per year
Utah	graduated fee system ($400 to $800)
Wyoming	5 1/2 % of appraised value of raw land ($50/yr)

values for the state's cabin sites. Idaho receives a minimum of $750 a year for its second tier leases (located off the lakes) and $2,800 to $3,000 for its lakeside properties. Idaho also has a major corporate leaseholder who pays $450,000 a year for a lakeside site for a corporate lodge. Idaho cabin leases contain a 5.3 percent annual fee escalator to account for inflation (Don Hobbs, Idaho, 1992). Idaho's revenues from cabin leases are approximately a million dollars a year**.

Prior to 1988, the Montana's cabin site lease fees were typically token payments of $25 to $50 a year. In 1988, cabin lease rates were revised to 3 1/2 percent of the appraised value of the land. In 1992, Montana cabin lease fees range from $200 to $1,000 a year, with most leases being in the $200 to $250 a year range. The legislature assigned the State Department of Revenue to conduct appraisals of state cabin state leases once every five years. Property values are rising in the recreational areas of western Montana, and appraisal values for cabin leases should be increasing. An example of this is at Placid Lake, where undeveloped private cabin sites are selling for $85,000 (Jeannie Fairbanks, Montana, 1992). If appraisal are based on current market conditions, Montana should be receiving $3,000 a year for comparable state cabin sites located elsewhere on Placid lake.

Sales of Cabin Sites

For many states, for example Wisconsin, the solution to unprofitable cabin leases was to sell off the leases. Washington is in the process of selling off its few remaining cabin sites. Minnesota has also recently sold many of its cabin sites.

Where cabin sites are sold, states are required to receive at least full market value for the property. The cabin site must be appraised prior to the sale. In most states, the sale of state cabin site must be transacted through a bidding process, usually a public auction.

The auctioning of state cabin leases has created an interesting dilemma for leaseholders in Minnesota. Minnesota's cabin site lessees successfully lobbied the state legislature to order the sale of the state's 2,000 cabin sites. When sites were auctioned, vigorous competition moved land sale prices much higher than appraised values. In some instances, leaseholders were out bid for their cabin sites, which forced them into selling or removing their cabins and other on-site improvements. After observing the outcomes of initial cabin site auctions, many leaseholders chose to renew state leases instead of attempting to purchase their cabin sites from the state (Jim Lawler, Minnesota, 1992).

After being requested to do so by leaseholders, the Montana legislature ordered the state to sell a small number of cabin leases in the Seeley Lake area. Montana also requires a bidding process when it sells state land. The bidding process could result in a non-leaseholder purchasing to a cabin site. If the current leaseholder and the purchaser could not reach agreement on compensation for on-site improvements, the compensation would be decided through an arbitration process. Statutes establishing the arbitration process only allow for compensation for the original costs of improvements. It is likely that this arbitration process would result in a major financial loss for the leaseholder.

Only Alaska is issuing significant new cabin leases. Alaska issues new leases through negotiation, a bidding process, or a lottery system. In the lottery system, citizens pay $5.00 for a chance to win a cabin site lease. Lottery winners are still required to pay a predetermined annual lease fee and to develop a cabin on the site within a specified period of time. Alaska acknowledges that the bid is the system which generates the most revenue for the state (Ron Swanson, Alaska, 1992).

Should Montana choose to award additional cabin site leases it is required to use a oral auction bidding process. The basis of the bidding would an annual rent payment. The minimum acceptable bid for a new cabin site is 5 percent of the appraised value of the cabin site.

In some instances, a state may choose to sell undeveloped recreation homesite instead of leasing the property. An example mentioned earlier in this report is the instance where Utah used a public auction to sell off 12 large lot recreational home sites near the Park City Ski Resort. Utah received 170 percent above the appraised value for these land sales.

Lease Terms

Lease terms for cabin leases range from 3 to 5 years in Louisiana to 50 years in Wyoming. Alaska and Idaho cabin leases are for 10 years and Minnesota's are 20 years. Montana cabin site leases are awarded for 15 years, after which the leaseholder has the right to renew the lease. There is no competitive bidding when cabin lease is renewed.

Montana's leasing system allows for leases to be reassigned when ownership of the on site improvements is transferred. However, Montana does not authorize leaseholders to sublease state owned cabin sites. Subleasing does occur, and in some instances leaseholders are securing substantial profits from the sublease. Montana does not receive a share of the sandwich profits accruing to the leaseholder.

Moratorium on New Cabin Site Leases

Montana owns numerous additional sites suitable for cabin development. Currently, Montana is imposing a moratorium on new leases for cabin sites, because it does not have enough staff to administer the leases.

APPENDIX A. Letter of Introduction to WSLCA Members

(State of Montana letterhead) May 27, 1992

(name and address of WSLCA contact)

Dear :

As you may be aware, Montana has this spring instituted for the first time a policy of general recreational access to state school trust lands. We have established a $5 license fee for this use. Because of this new policy, the Montana Legislature has directed the Department of State Lands to perform an economic analysis of the values of surface uses of state lands with emphasis on recreation. Other uses that we intend to look closely at include grazing, agriculture, cabin sites and commercial uses.

As part of our review of alternative procedures for determining the values of surface land uses, we would like to update our understanding of how other states are approaching these issues. At this point we have contracted with an economic research firm in Missoula, Montana - Bioeconomics, Inc. - to assist in our study. The individuals working on this project include Dr. John Duffield, James Boyer and Chris Neher.

This letter is to let you know that we have provided our contractor with the Western States Land Commissioners Association (WSLCA) member list. The contractor will be contacting you by phone in the near future. We would appreciate very much your cooperation. Basically they will be wanting to obtain information on the values your agency has established for leasing surface uses. We would also like to examine alternative methods for determining fair market values. We are particularly interested in any studies your agency has undertaken concerning any of these surface uses.

We feel that the information that we assemble will be beneficial to the association. At the conclusion of our study, we intend to circulate a summary report that outlines our findings of general interest to the WSLCA members.

Feel free to contact myself or Greg Hallsten (our project coordinator) at 406-444-2074 (Helena) if you have any questions. If you have some comments or ideas you would like to pass on to our contractor, Chris Neher can be reached at 406-721-2265 (Missoula).

Thanks for your help!

Sincerely,

Jeff Hagener
Lands Division Administrator

APPENDIX B. List of Individuals Contacted by State

Alaska- Ron Swanson
Arizona- Bill Waskow, Ron Ruziska
Arkansas- Steve Hollowell
Colorado- John Brejka, Rod Carter
California- Jane Sekeksky, Don Reese
Hawaii- Mason Young
Idaho- Don Hobbs
Louisiana- Karl Morgan
Minnesota- Jim Lawler
Montana- Jeff Hagener, Greg Hallsten, Jeannie Fairbanks, Chuck Wright
Nebraska- Richard LeBlanc
Neveda- Pam Wilcox
New Mexico- Duane Glidewell, Pleas Glenn
North Dakota- Mike Haupt, Mike Brand
Oklahoma- John Taylor, Norvell Clarke
Oregon- Jerry Hedrick, Burt Lewis
South Dakota- Curt Johnson, David Weist, Mile Cornelison
Texas- Ned Polk, Karl Lindberg
Utah- Gary Bagely
Wisconsin- Steve Gauger
Washington- Roy Henderson, Rich Scribner
Wyoming- Jamie Van Hatten

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